

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/04

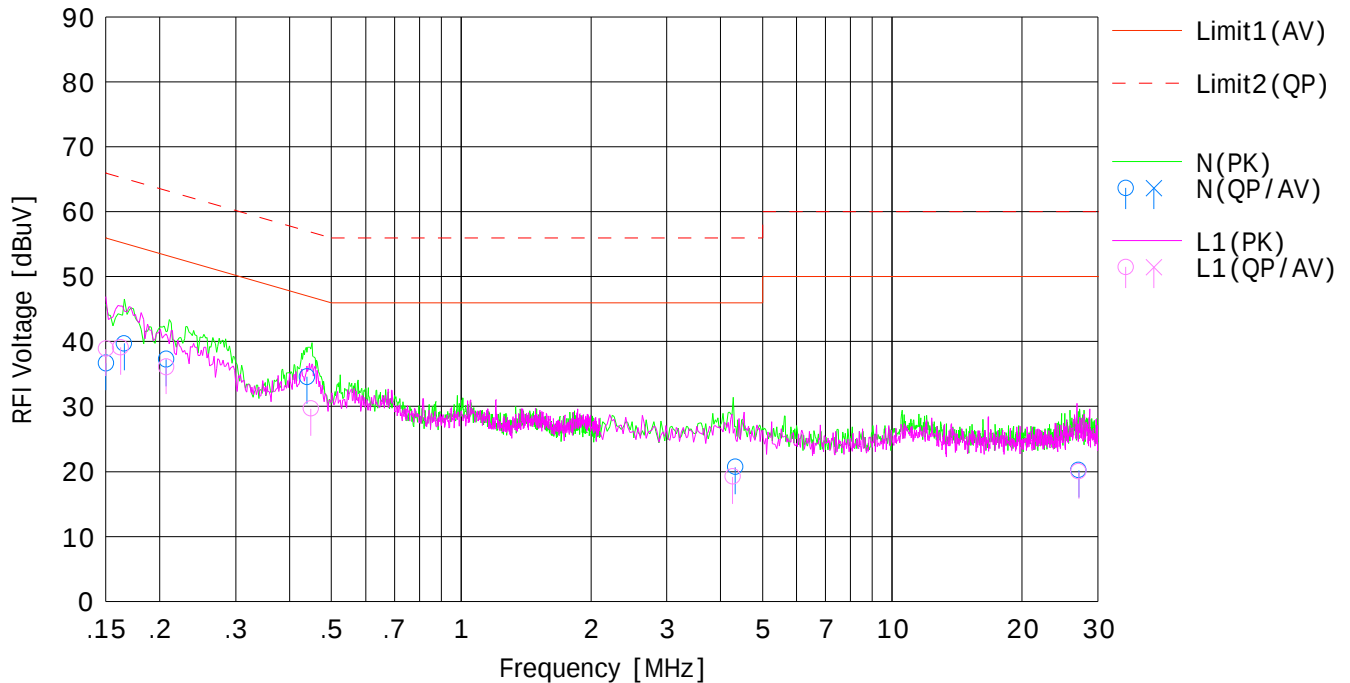
Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035

Mode : Transmitting (DH5 2402MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V (AC Adaptor 120V/60Hz)
Temp./Humi. : 26 /34%

Remarks : -

Limit1 : FCC 15C(15.207) AV
Limit2 : FCC 15C(15.207) QP

Engineer : Hikaru Shirasawa



No.	Freq. [MHz]	Reading		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		<QP>	<AV>		<QP>	<AV>	<AV>	<QP>	<AV>	<QP>		
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.15000	27.0	---	9.7	36.7	---	56.0	66.0	---	29.3	N	
2	0.16561	30.0	---	9.7	39.7	---	55.2	65.2	---	25.5	N	
3	0.20712	27.6	---	9.7	37.3	---	53.3	63.3	---	26.0	N	
4	0.43910	24.9	---	9.7	34.6	---	47.1	57.1	---	22.5	N	
5	4.32913	10.9	---	9.8	20.7	---	46.0	56.0	---	35.3	N	
6	27.07695	9.4	---	10.8	20.2	---	50.0	60.0	---	39.8	N	
7	0.15000	29.2	---	9.7	38.9	---	56.0	66.0	---	27.1	L1	
8	0.16225	29.4	---	9.7	39.1	---	55.3	65.3	---	26.2	L1	
9	0.20708	26.4	---	9.7	36.1	---	53.3	63.3	---	27.2	L1	
10	0.44850	20.0	---	9.7	29.7	---	46.9	56.9	---	27.2	L1	
11	4.27229	9.4	---	9.8	19.2	---	46.0	56.0	---	36.8	L1	
12	27.10900	9.2	---	10.8	20.0	---	50.0	60.0	---	40.0	L1	

Calculation: Result [dBuV] = Reading [dBuV] + C.Fac (LISN+Cable) [dB]

20dB Bandwidth and Carrier Frequency Separation

Test place UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date 2009/11/12
Temperature / Humidity 24deg.C. , 50%
Engineer Tatsuya Arai
Mode Tx,

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency Separation [MHz]
DH5	2402.0	0.956	1.004	≥ 0.637
DH5	2441.0	0.950	1.004	≥ 0.633
DH5	2480.0	0.950	1.002	≥ 0.633
3DH5	2402.0	1.293	1.002	≥ 0.862
3DH5	2441.0	1.275	1.002	≥ 0.850
3DH5	2480.0	1.275	1.002	≥ 0.850
Inquiry	2441.0	0.830	2.004	≥ 0.553

Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
No limit applies to 20dB Bandwidth.

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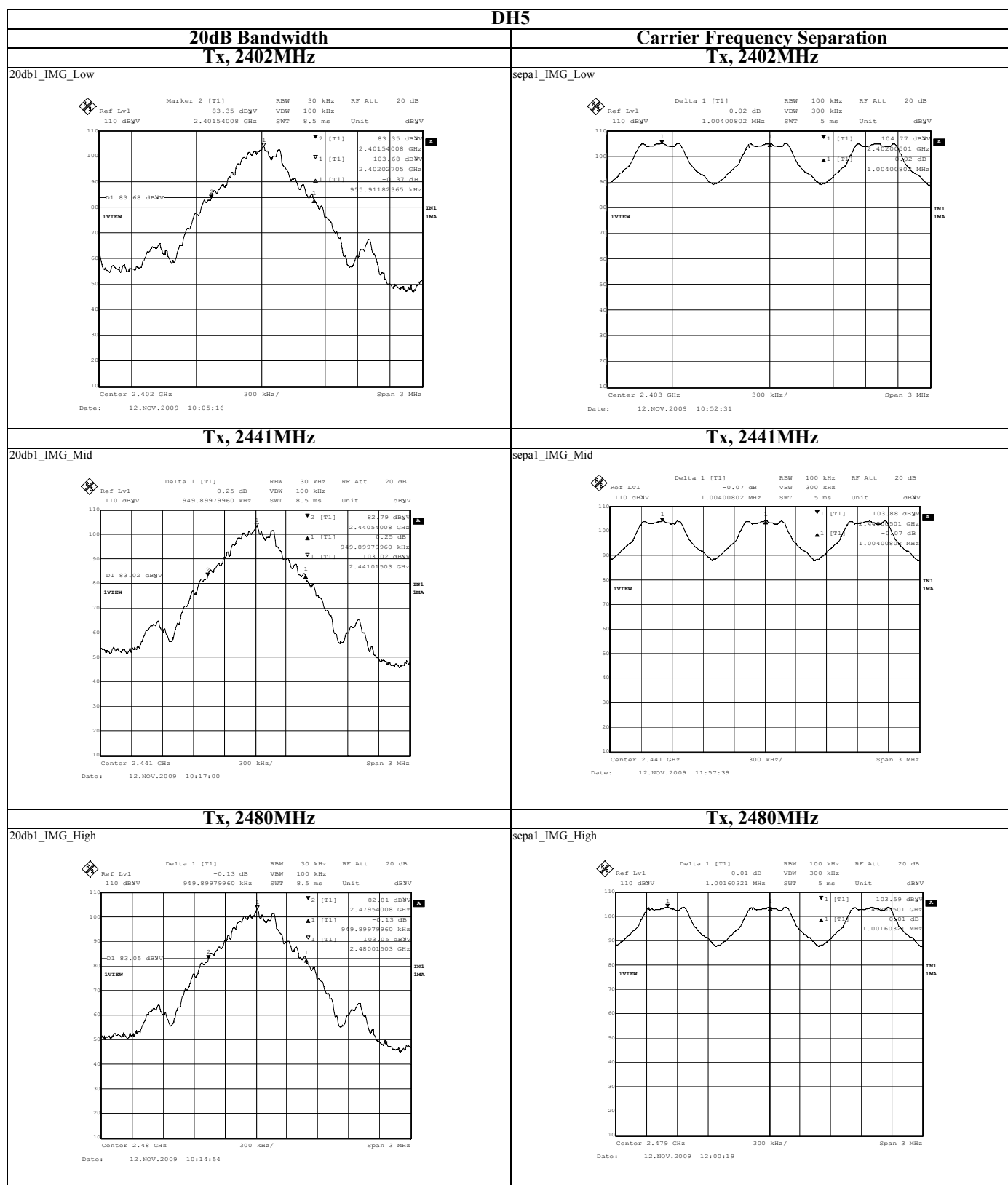
Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

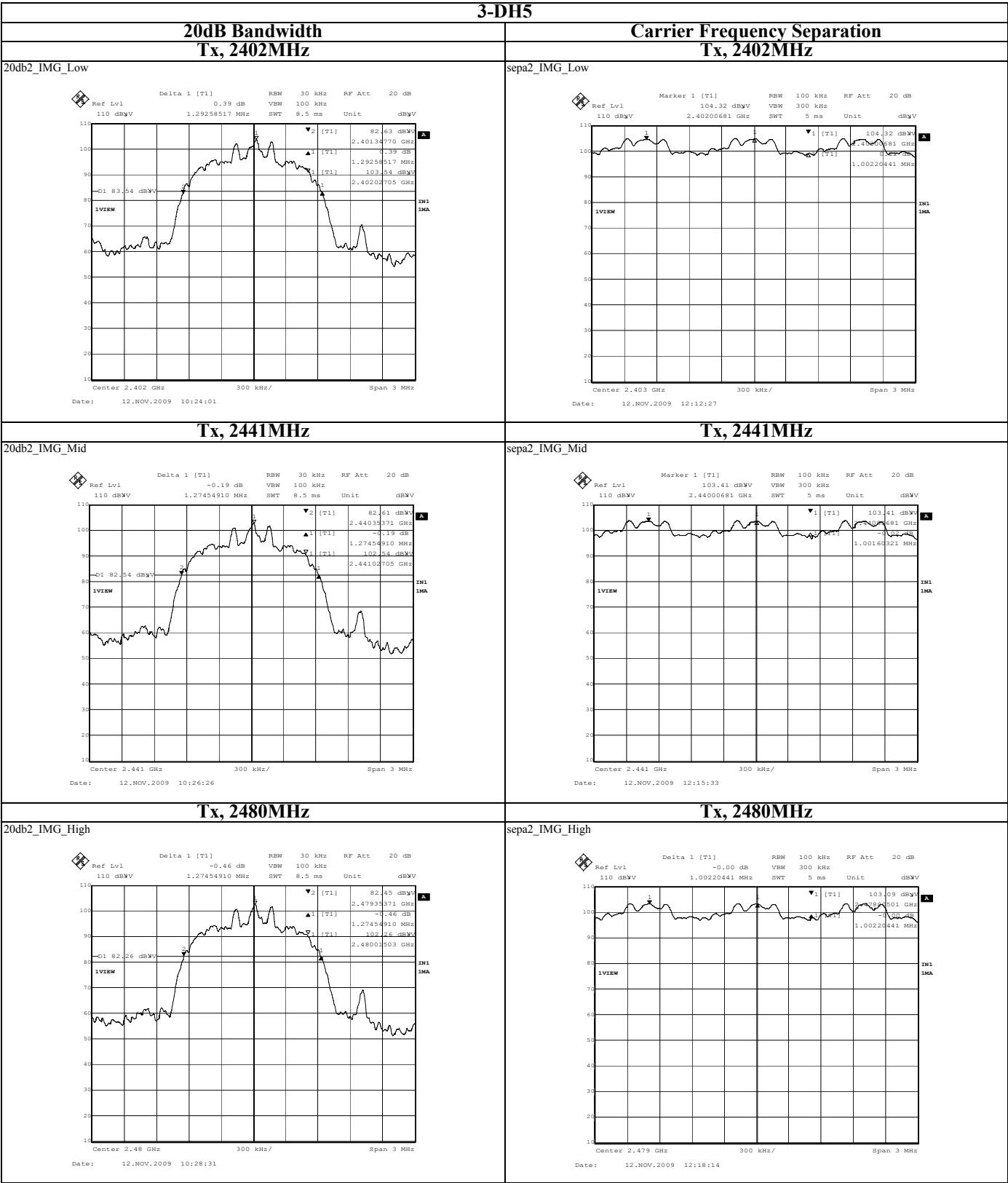
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20dB Bandwidth and Carrier Frequency Separation



20dB Bandwidth and Carrier Frequency Separation



Number of Hopping Frequency (Conducted)

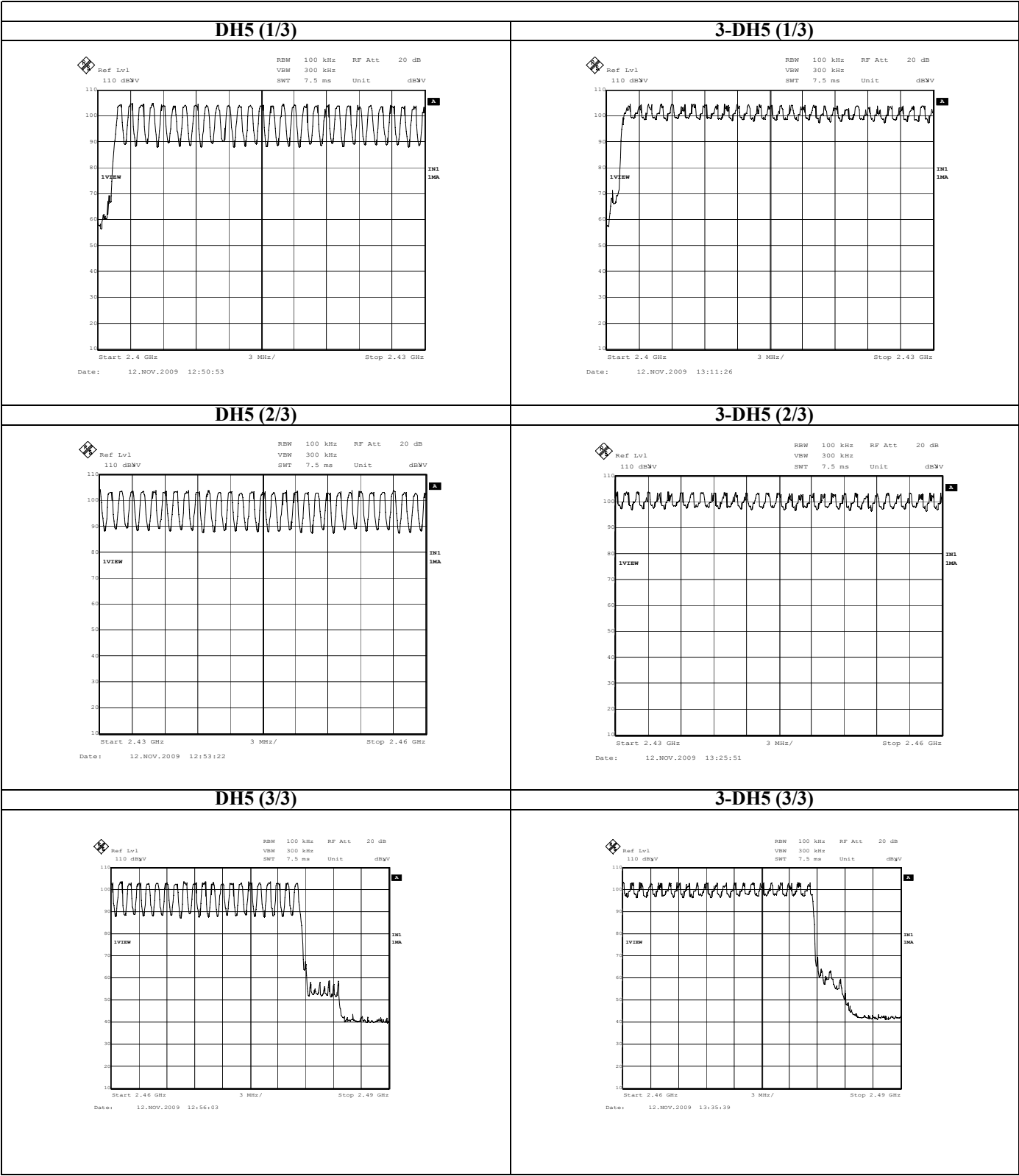
Test place UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date 2009/11/12
Temperature / Humidity 24deg.C. , 50%
Engineer Tatsuya Arai
Mode Tx,

Mode	Number of Channel [times]	Limit [times]
DH5	79	>=15
3-DH5	79	>=15
Inquiry	32	>=15

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Number of Hopping Frequency

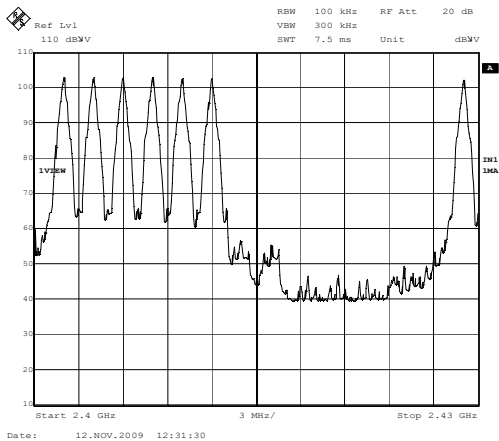


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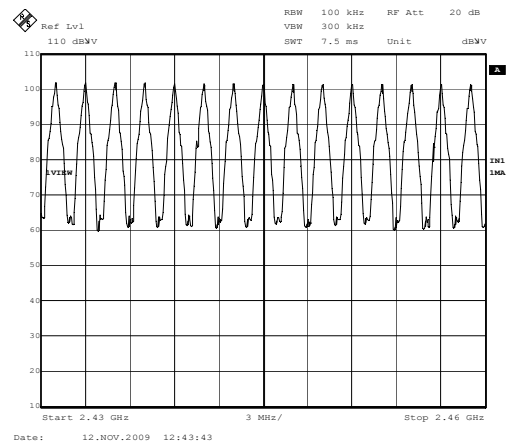
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Number of Hopping Frequency

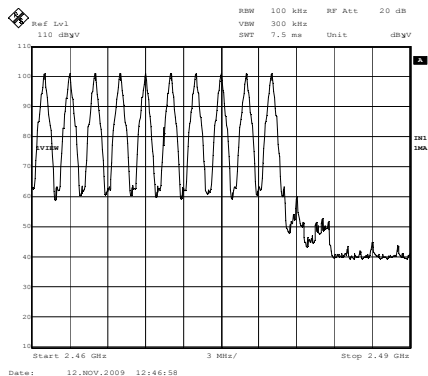
Inquiry (1/3)



Inquiry (2/3)



Inquiry (3/3)



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Dwell Time (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
 Date 2009/11/12
 Temperature / Humidity 24deg.C. , 50%
 Engineer Tatsuya Arai
 Mode Tx,

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50.2 times / 5 sec. x 31.6 sec. = 318 times	0.406	129	400
DH3	25.2 times / 5 sec. x 31.6 sec. = 160 times	1.670	267	400
DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	2.916	315	400
3DH1	50.4 times / 5 sec. x 31.6 sec. = 319 times	0.417	133	400
3DH3	25.2 times / 5 sec. x 31.6 sec. = 160 times	1.667	267	400
3DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	2.927	316	400
Inquiry	100.0 times / 1 sec. x 12.8 sec. = 1280 times	0.118	151	400

Sample Calculation

Result = Number of transmission x Length of transmission time

*Average data of 5 tests.(except Inquiry)

Mode	Sampling [times]					Average [times]
	1	2	3	4	5	
DH1	50	50	51	50	50	50.2
DH3	25	25	25	26	25	25.2
DH5	17	17	17	17	17	17.0
3DH1	51	50	51	50	50	50.4
3DH3	26	25	25	25	25	25.2
3DH5	17	17	17	17	17	17.0
Inquiry	100	100	100	100	100	100.0

Sample Calculation

Average= Summation(Sampling 1 to 5) / 5

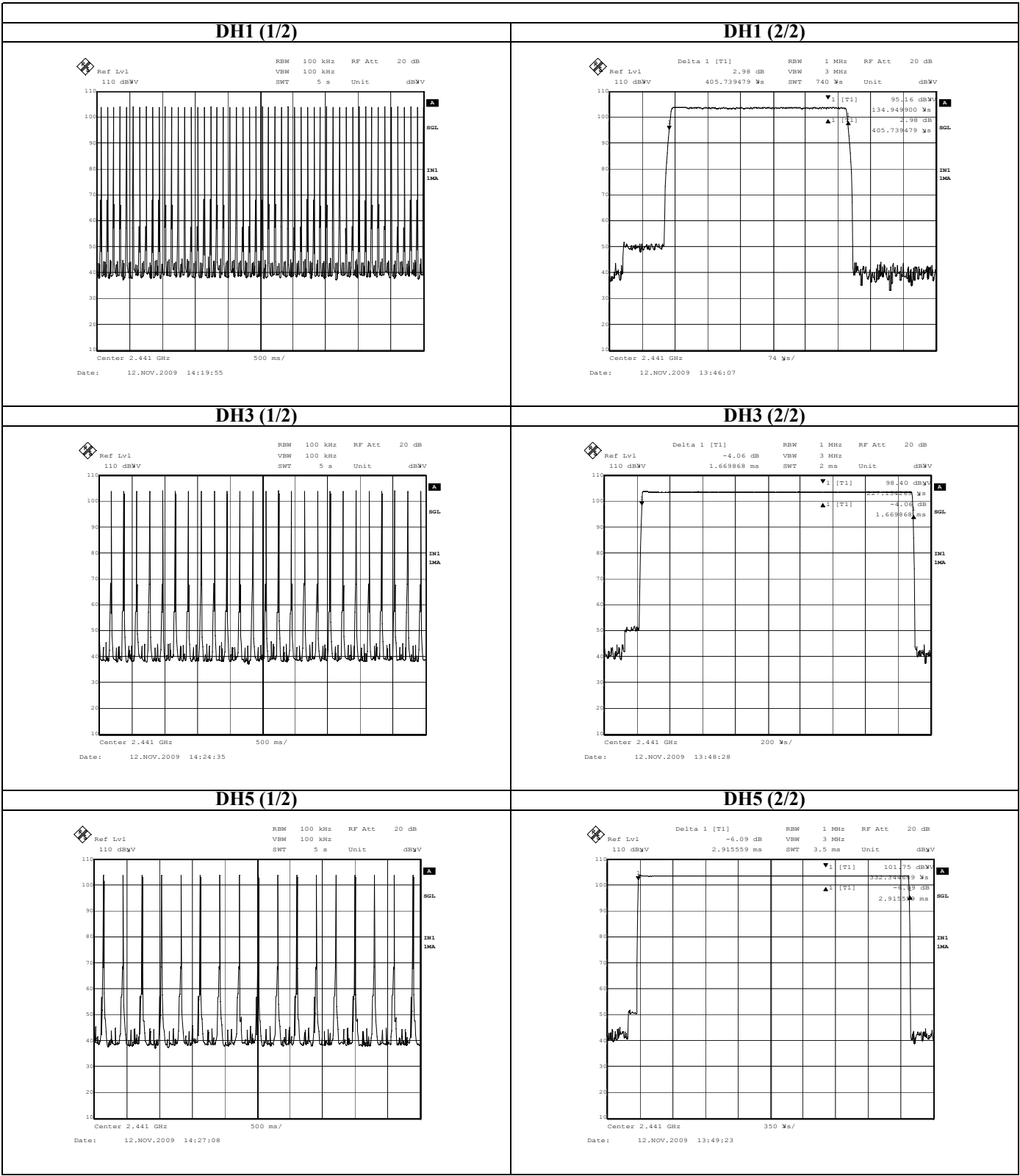
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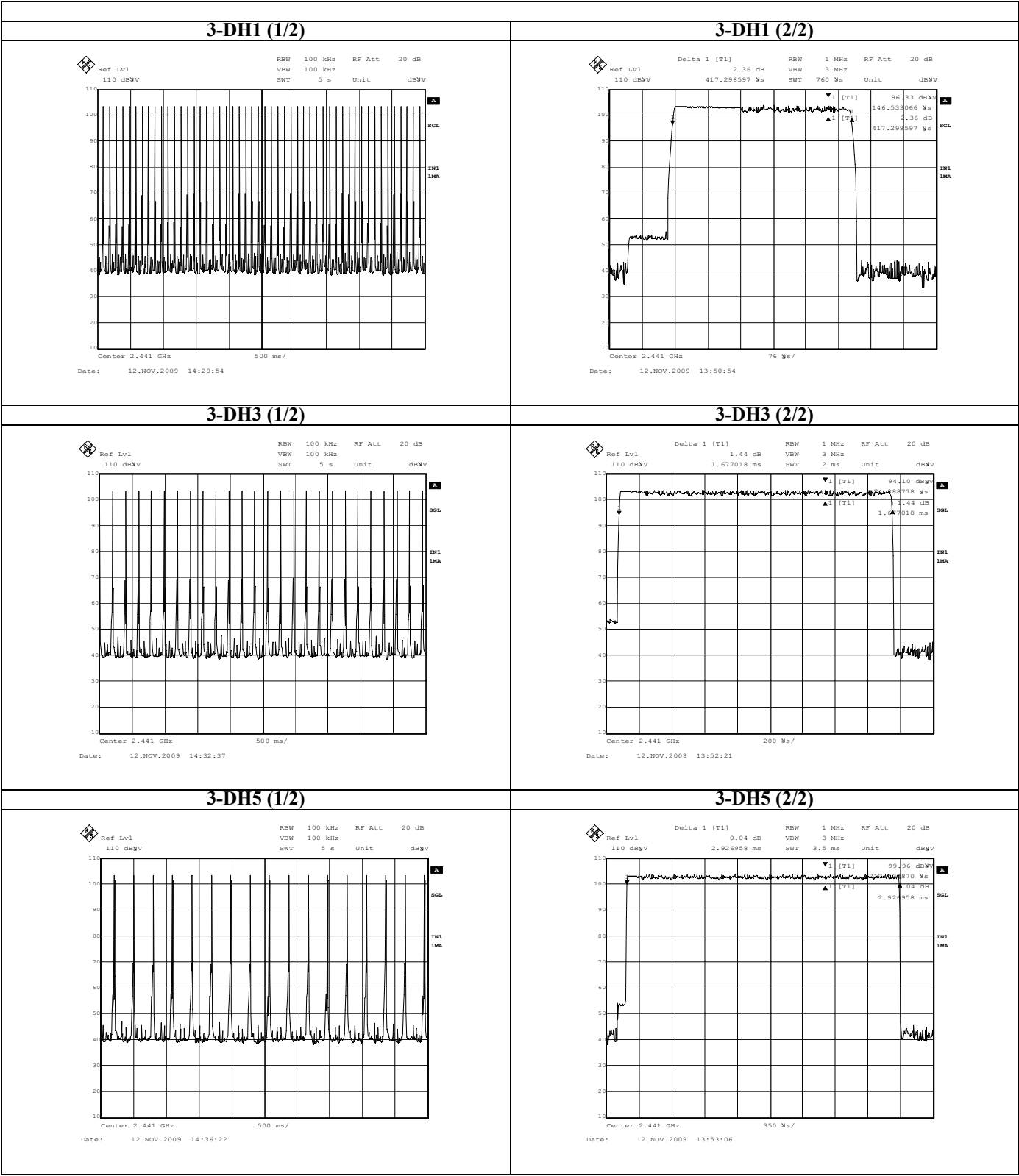
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Dwell time



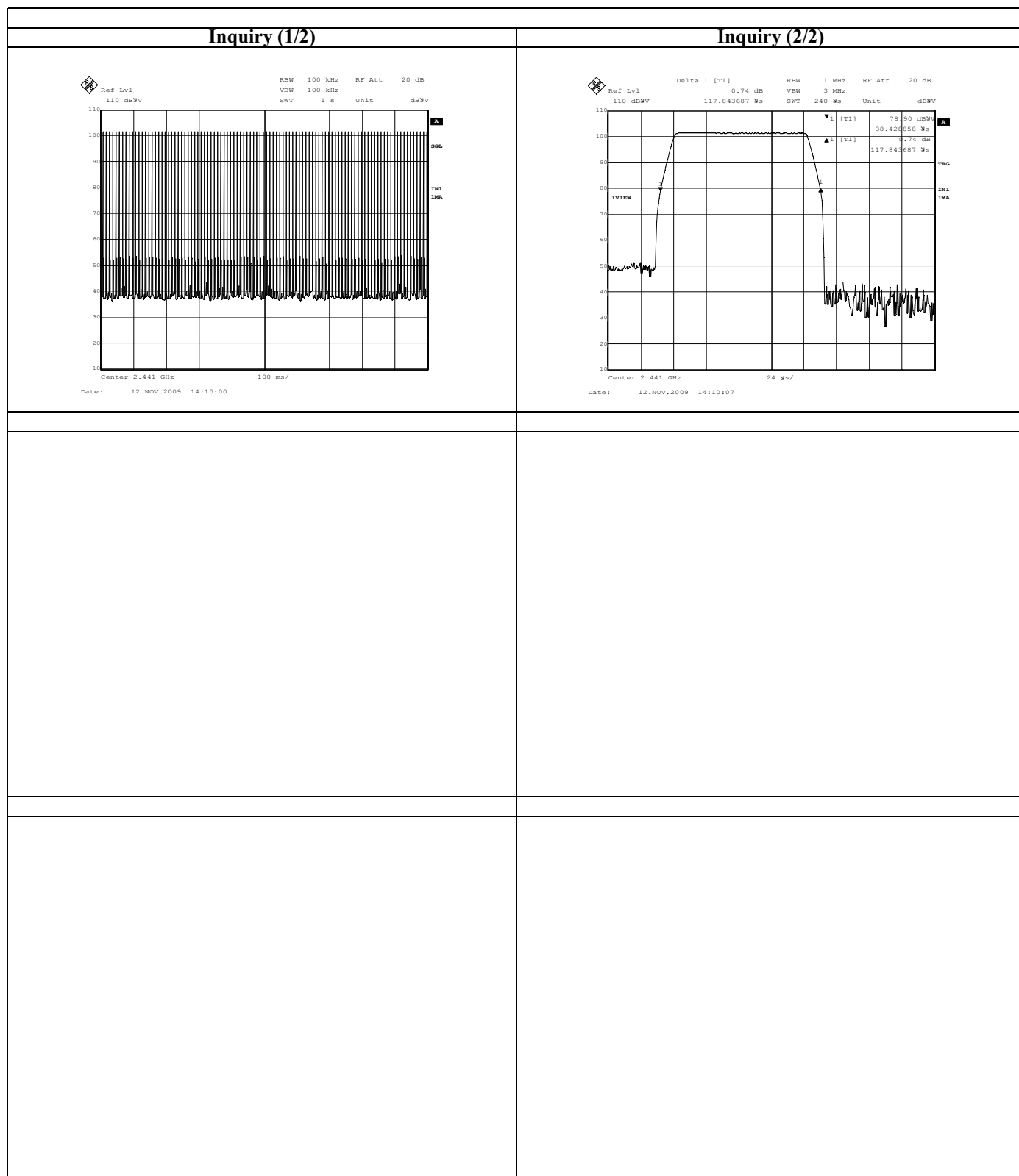
Dwell time



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Dwell time



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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date 2009/11/12
Temperature / Humidity 24deg.C. , 50%
Engineer Tatsuya Arai
Mode Tx,

BDR (DH5)

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-2.23	0.70	0.00	-1.53	0.70	20.97	125	22.50
Mid	2441.0	-2.46	0.70	0.00	-1.76	0.67	20.97	125	22.73
High	2480.0	-3.04	0.70	0.00	-2.34	0.58	20.97	125	23.31

EDR (2-DH5)

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-2.28	0.70	0.00	-1.58	0.70	20.97	125	22.55
Mid	2441.0	-2.64	0.70	0.00	-1.94	0.64	20.97	125	22.91
High	2480.0	-3.35	0.70	0.00	-2.65	0.54	20.97	125	23.62

EDR (3-DH5)

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-2.15	0.70	0.00	-1.45	0.72	20.97	125	22.42
Mid	2441.0	-2.48	0.70	0.00	-1.78	0.66	20.97	125	22.75
High	2480.0	-3.18	0.70	0.00	-2.48	0.56	20.97	125	23.45

Sample Calculation:

Result = Reading + Cable Loss (SCC-G12) + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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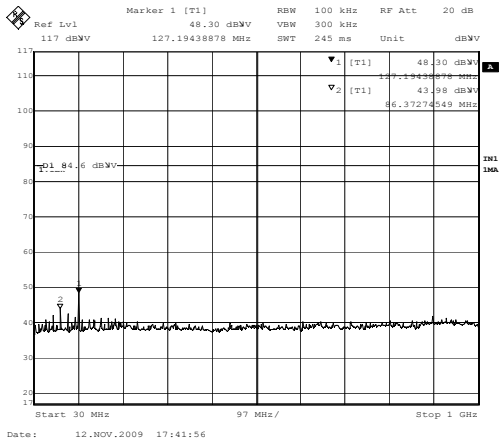
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Spurious emission (Conducted)

DH5,
Tx, 2402MHz

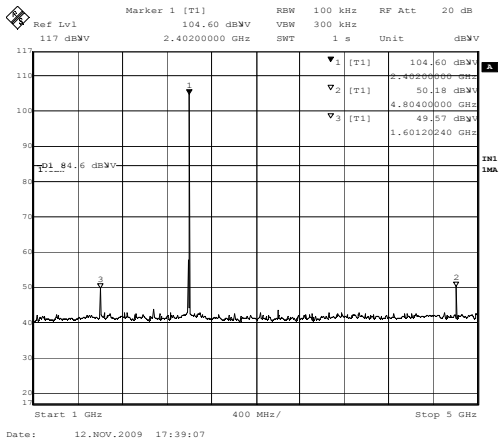
30MHz - 1GHz

Low1-SE2_IMG_Low



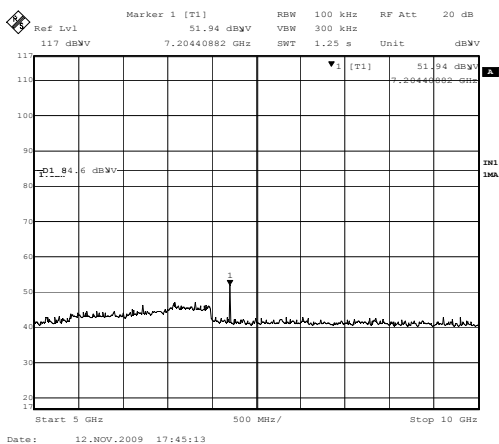
1GHz - 5GHz

Low1-SE1_IMG_Low



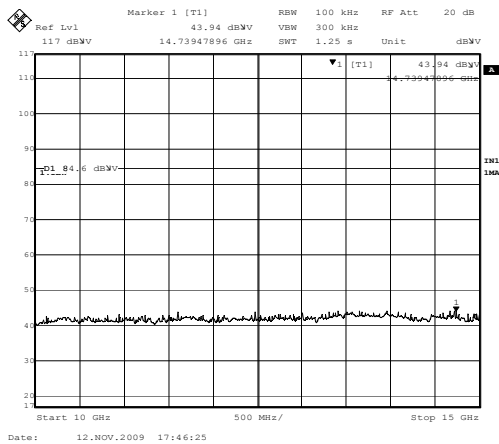
5GHz - 10GHz

Low1-SE3_IMG_Low



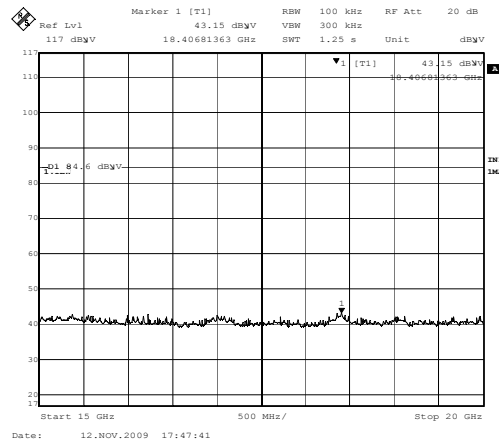
10GHz - 15GHz

Low1-SE4_IMG_Low



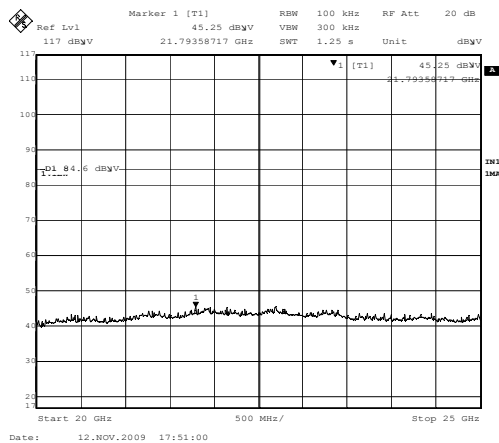
15GHz - 20GHz

Low1-SE5_IMG_Low



20GHz - 25GHz

Low1-SE6_IMG_Low

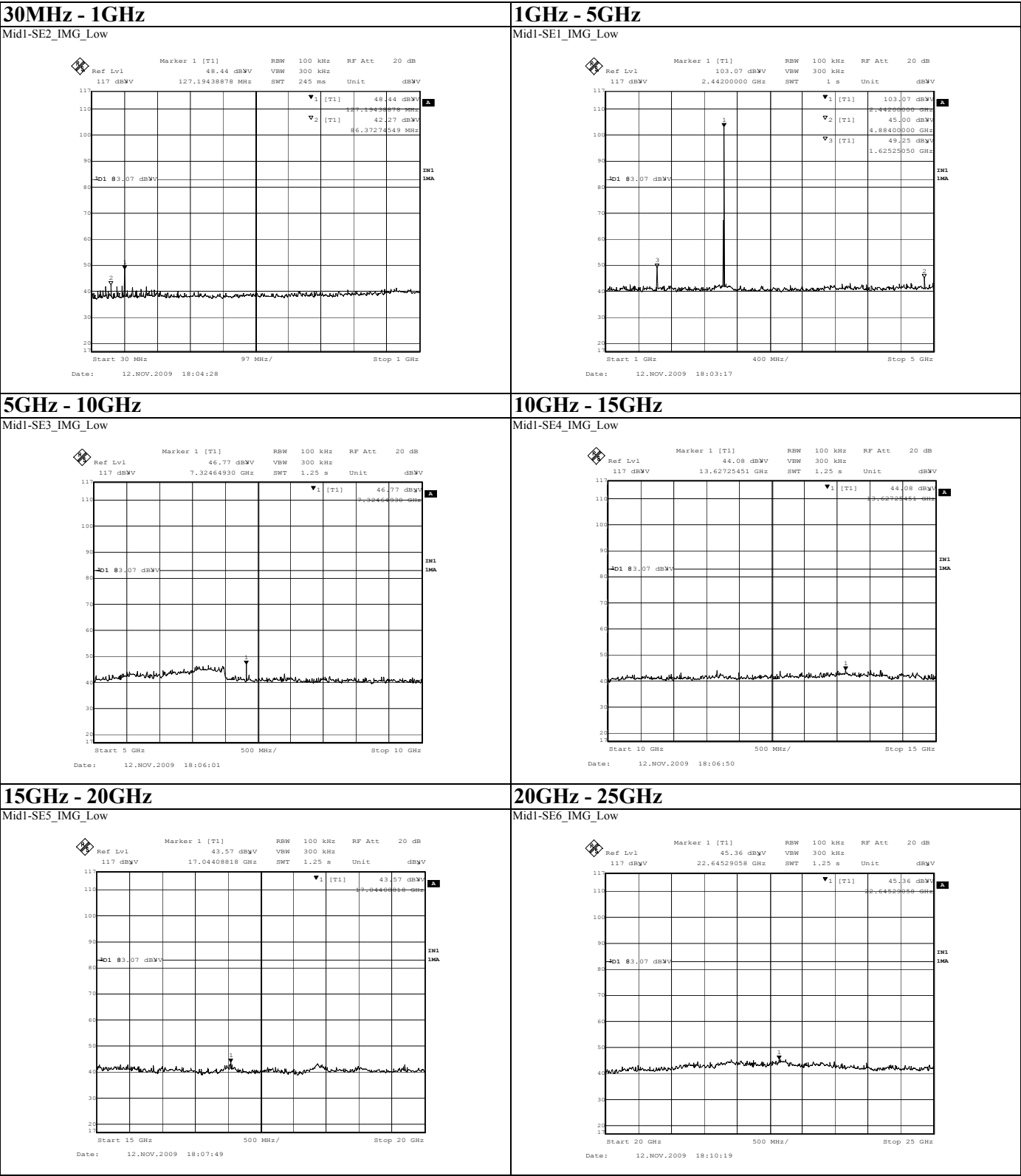


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Spurious emission (Conducted)

DH5,
Tx, 2441MHz



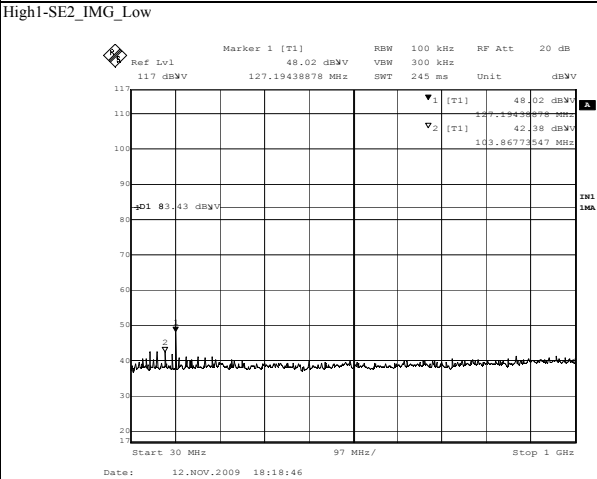
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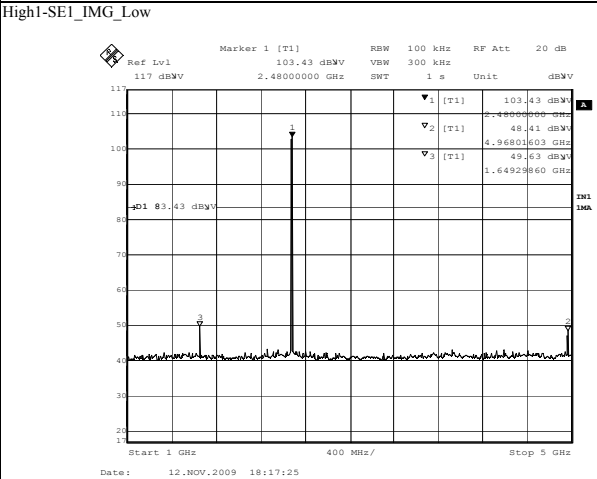
Spurious emission (Conducted)

DH5,
Tx, 2480MHz

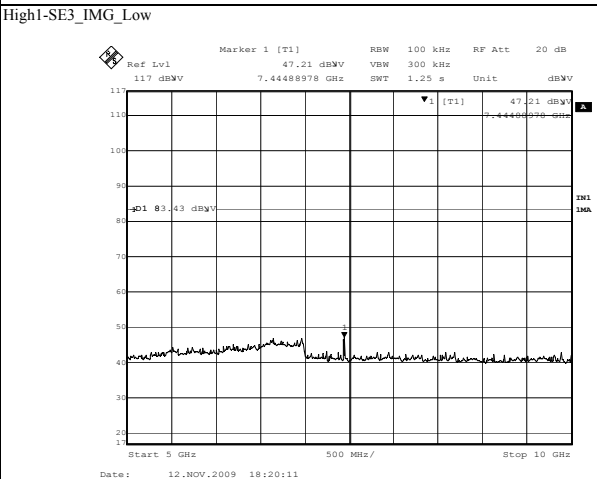
30MHz - 1GHz



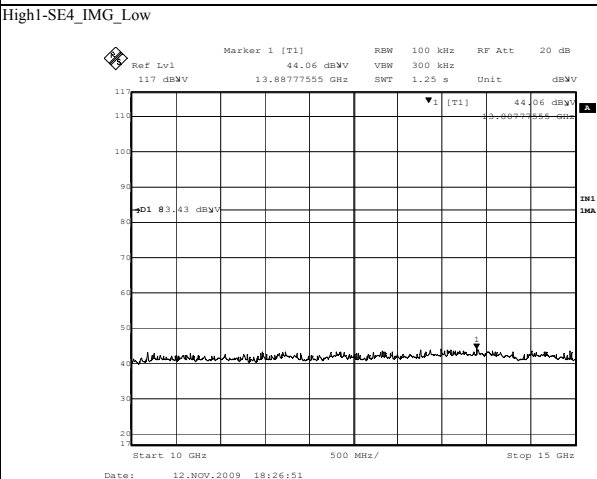
1GHz - 5GHz



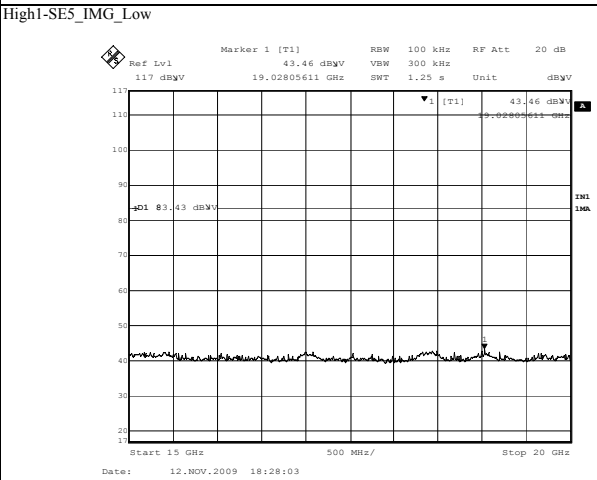
5GHz - 10GHz



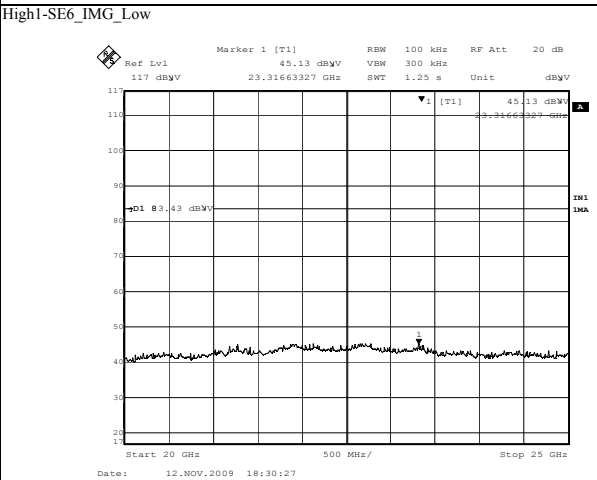
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



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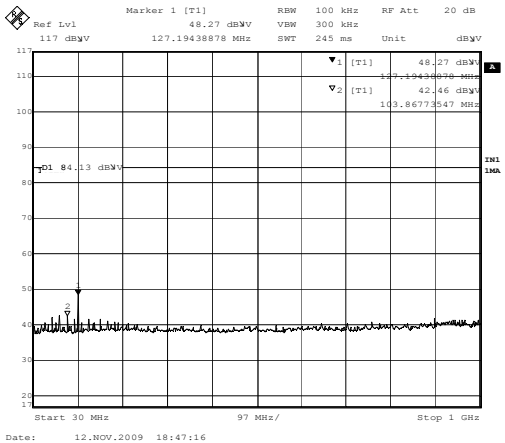
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Spurious emission (Conducted)

DH5,
Hopping

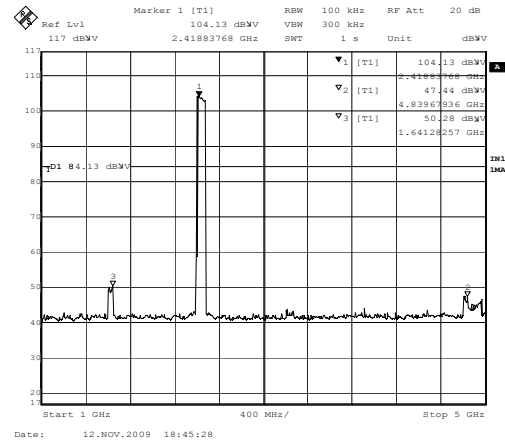
30MHz - 1GHz

Mid2Rx-SE2_IMG_Low



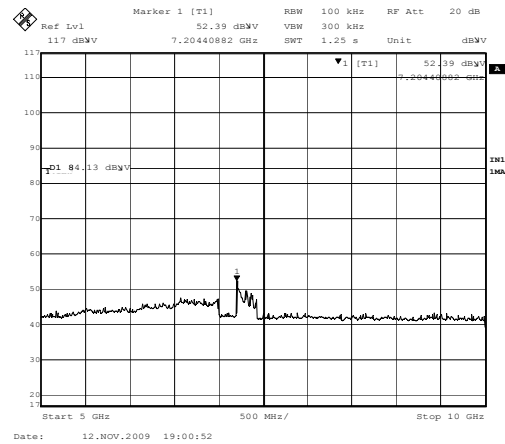
1GHz - 5GHz

Mid2Rx-SE1_IMG_Low



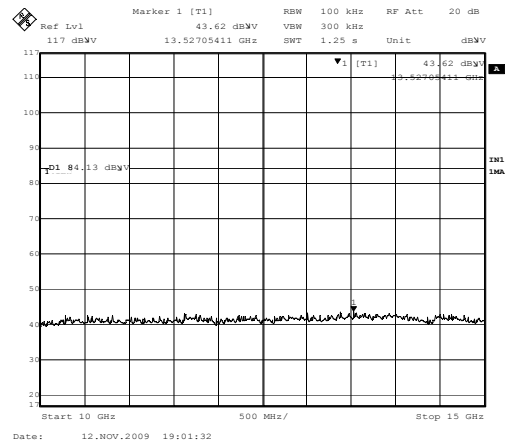
5GHz - 10GHz

Mid2Rx-SE3_IMG_Low



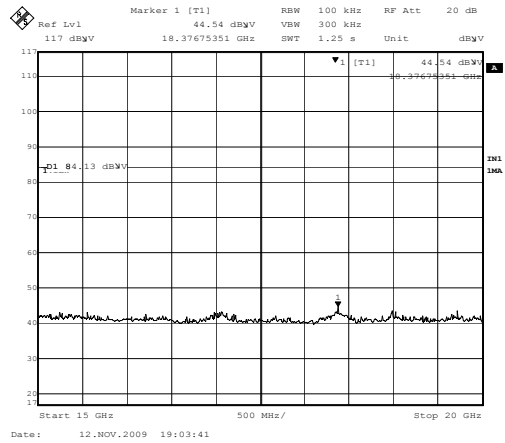
10GHz - 15GHz

Mid2Rx-SE4_IMG_Low



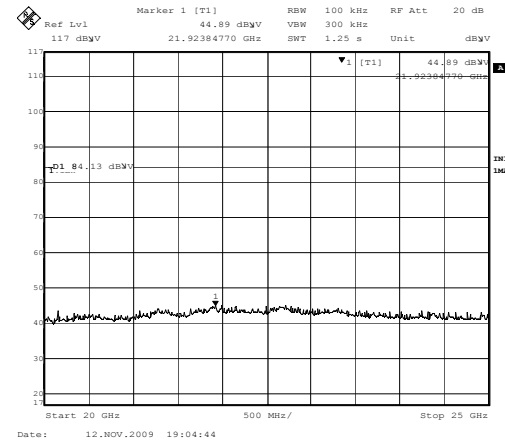
15GHz - 20GHz

Mid2Rx-SE5_IMG_Low



20GHz - 25GHz

Mid2Rx-SE6_IMG_Low



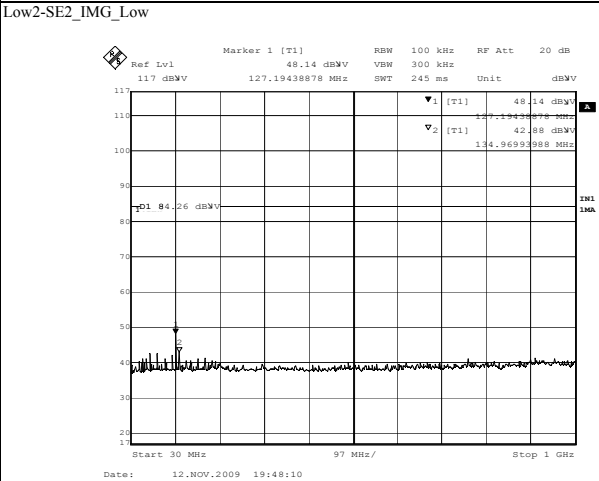
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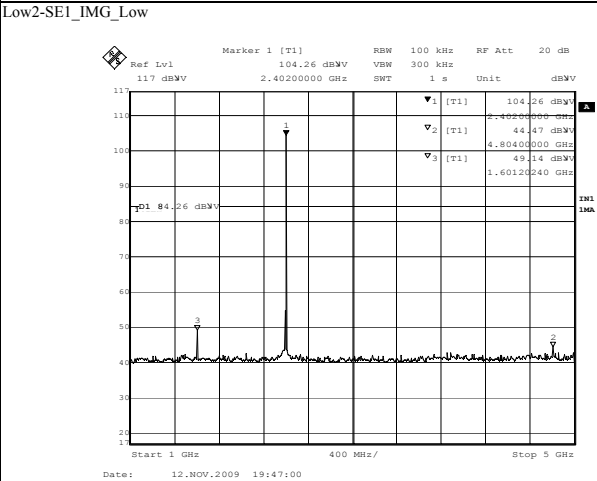
Spurious emission (Conducted)

3-DH5,
Tx, 2402MHz

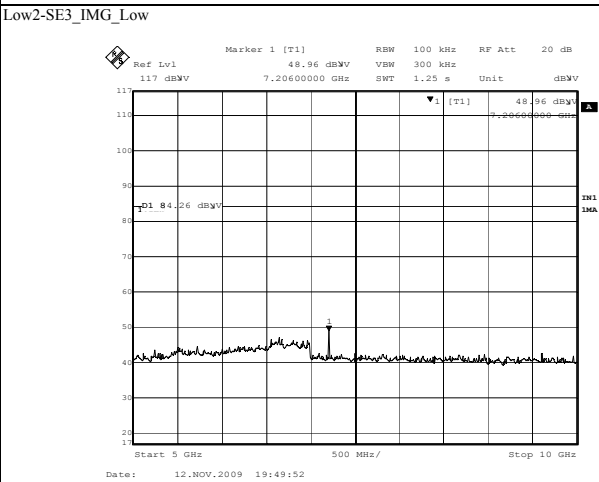
30MHz - 1GHz



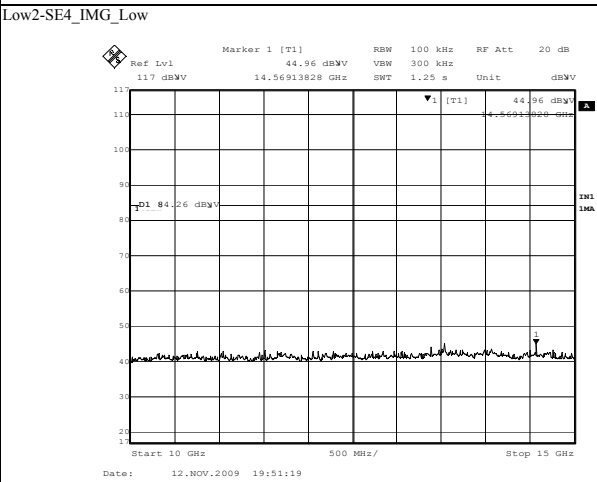
1GHz - 5GHz



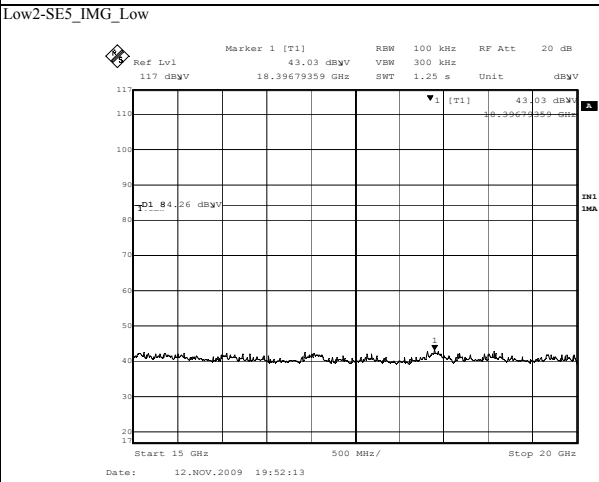
5GHz - 10GHz



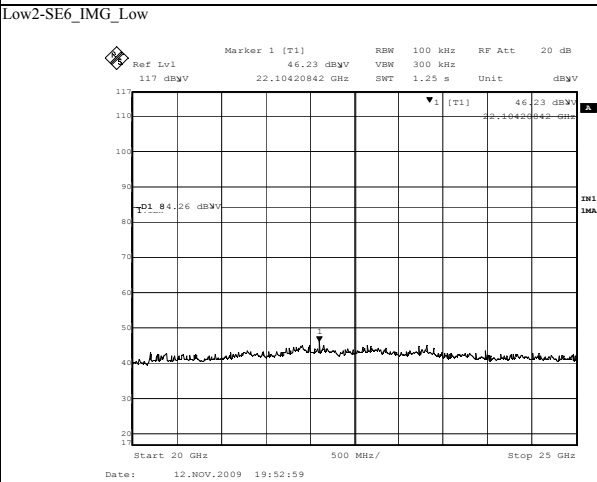
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



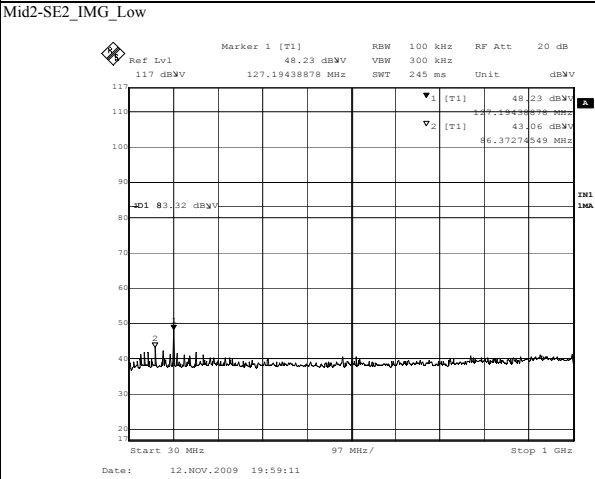
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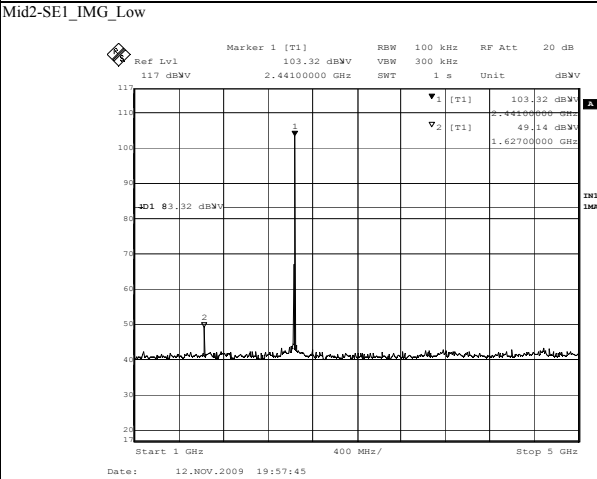
Spurious emission (Conducted)

3-DH5,
Tx, 2441MHz

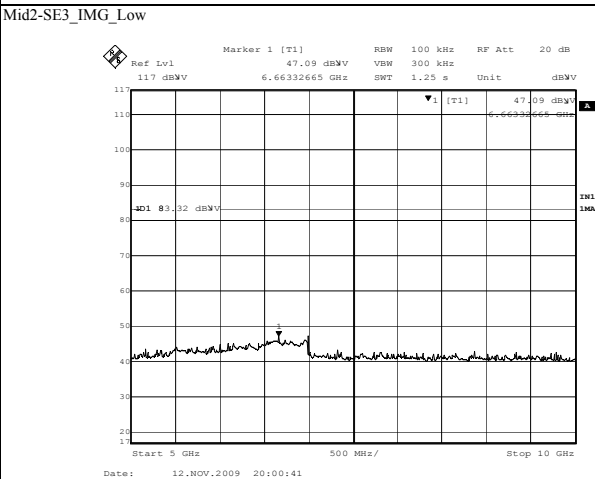
30MHz - 1GHz



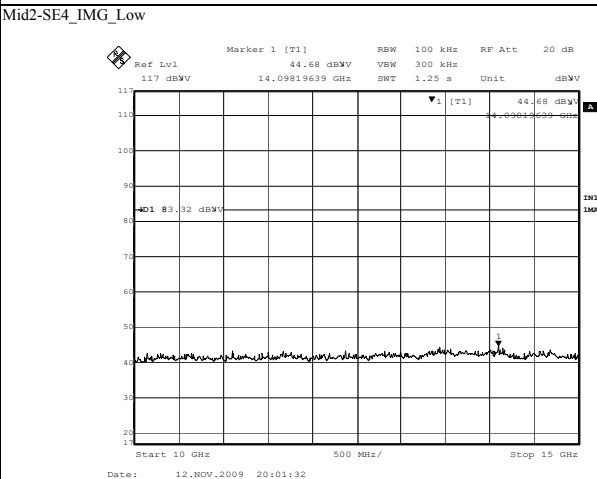
1GHz - 5GHz



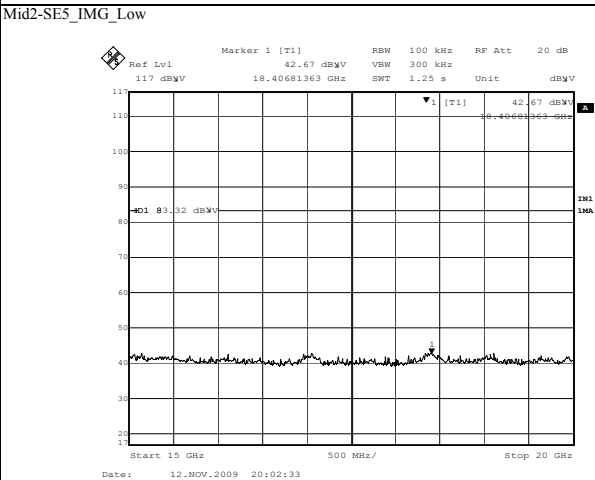
5GHz - 10GHz



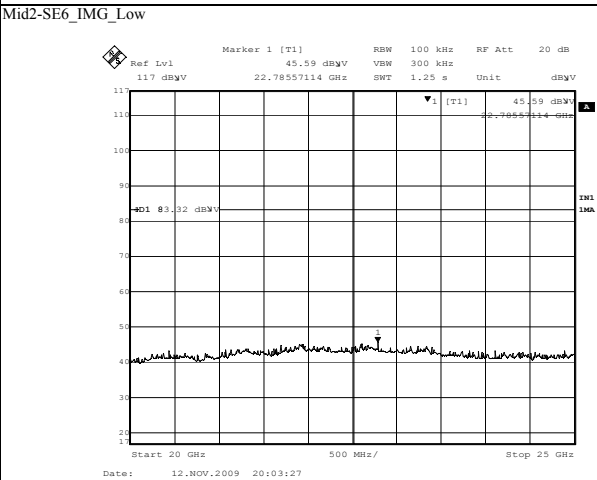
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



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Shonan EMC Lab.

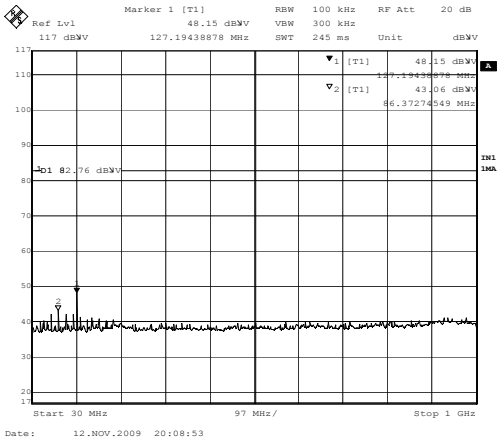
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Spurious emission (Conducted)

3-DH5,
Tx, 2480MHz

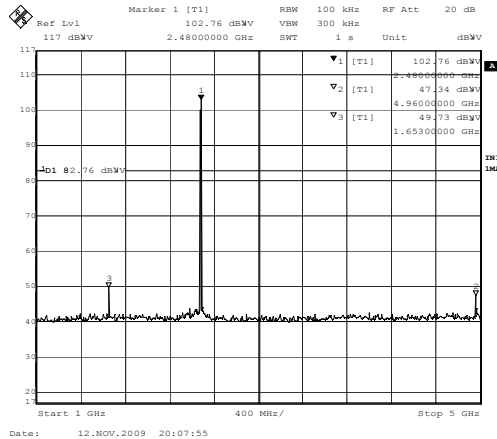
30MHz - 1GHz

High2-SE2_IMG_Low



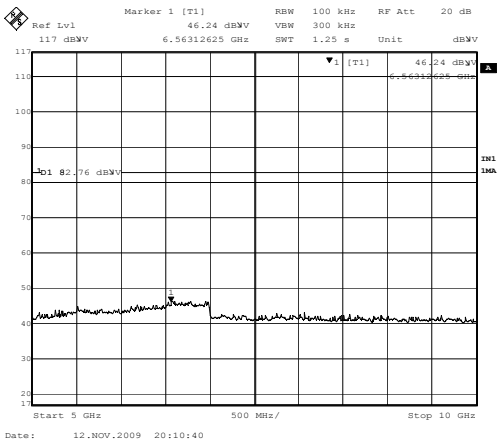
1GHz - 5GHz

High2-SE1_IMG_Low



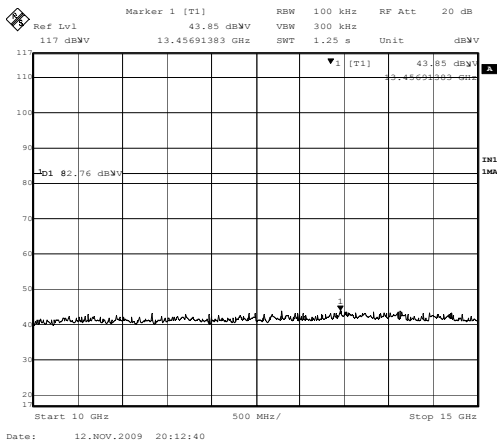
5GHz - 10GHz

High2-SE3_IMG_Low



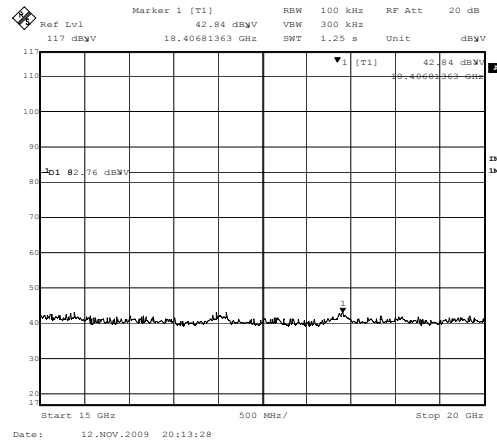
10GHz - 15GHz

High2-SE4_IMG_Low



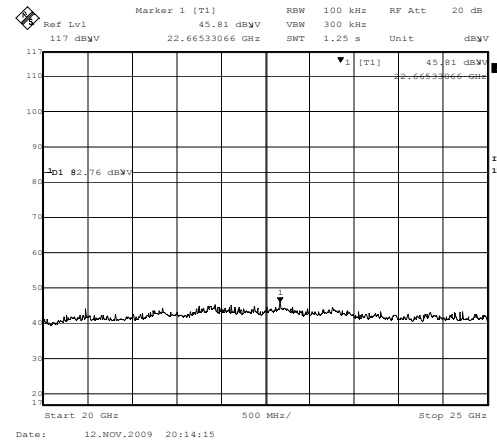
15GHz - 20GHz

High2-SE5_IMG_Low



20GHz - 25GHz

High2-SE6_IMG_Low



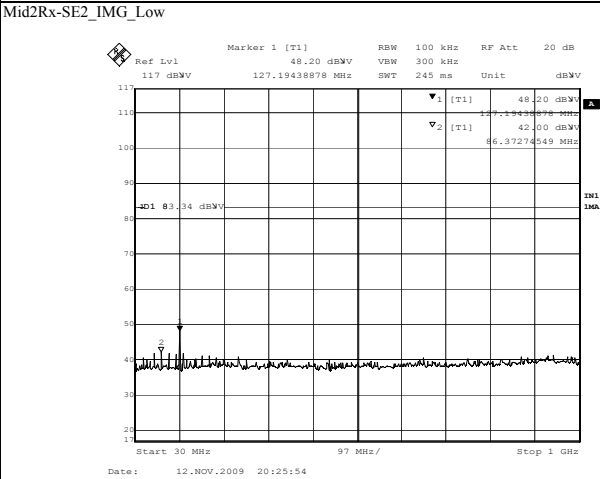
UL Japan, Inc.
Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

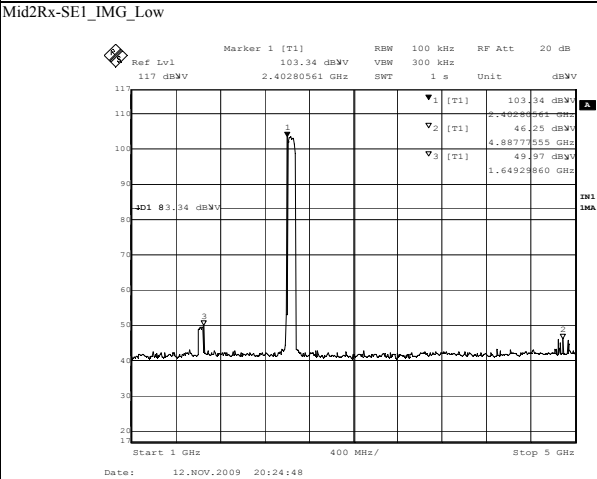
Spurious emission (Conducted)

3-DH5,
Hopping

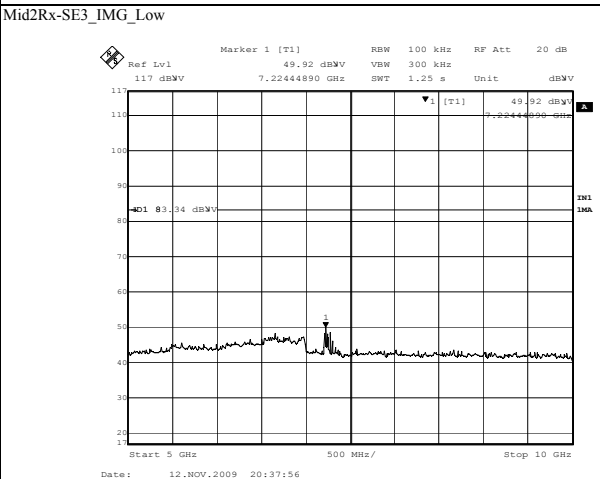
30MHz - 1GHz



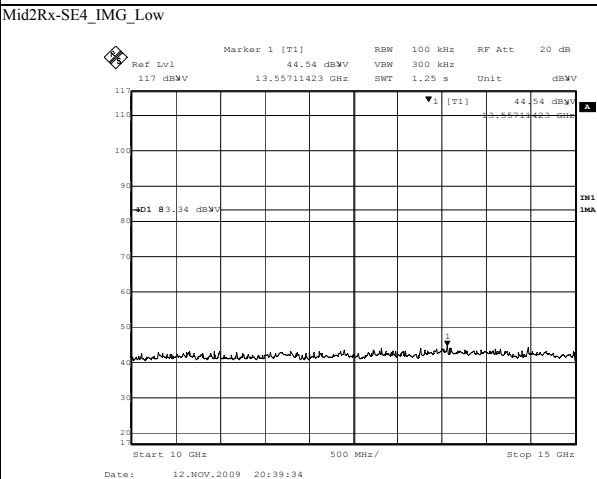
1GHz - 5GHz



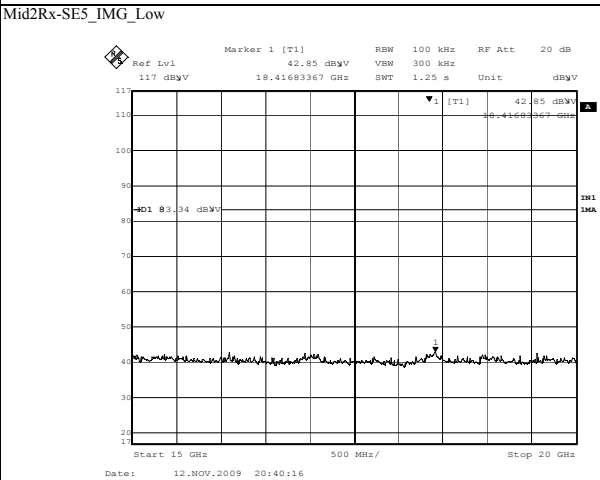
5GHz - 10GHz



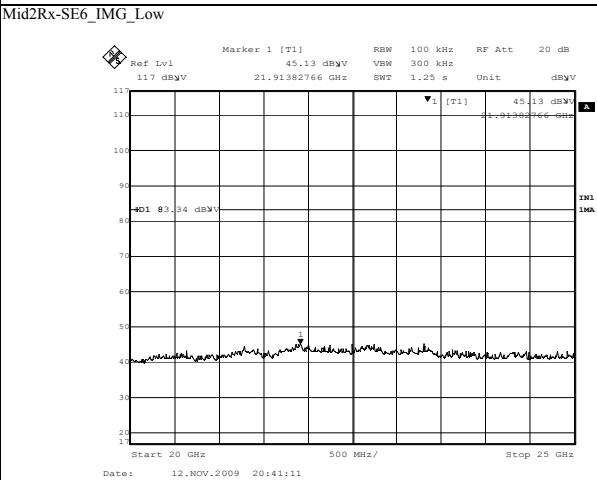
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



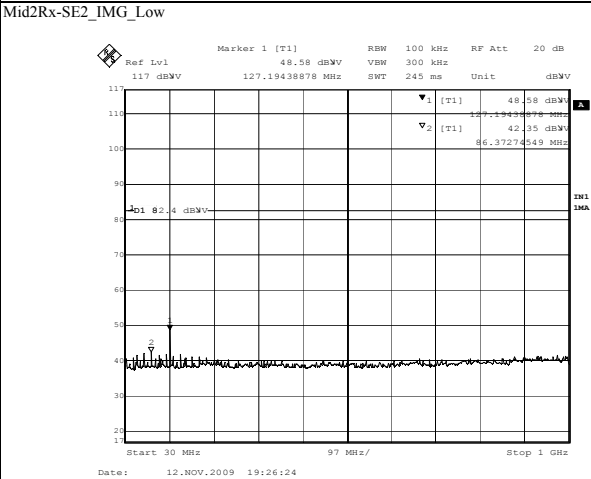
UL Japan, Inc.
Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

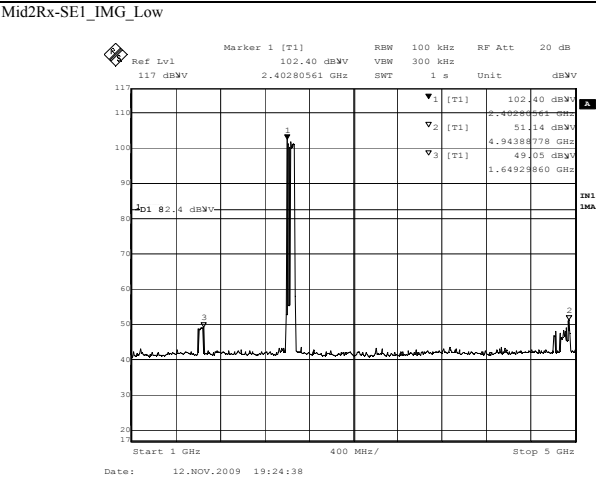
Spurious emission (Conducted)

Inquiry

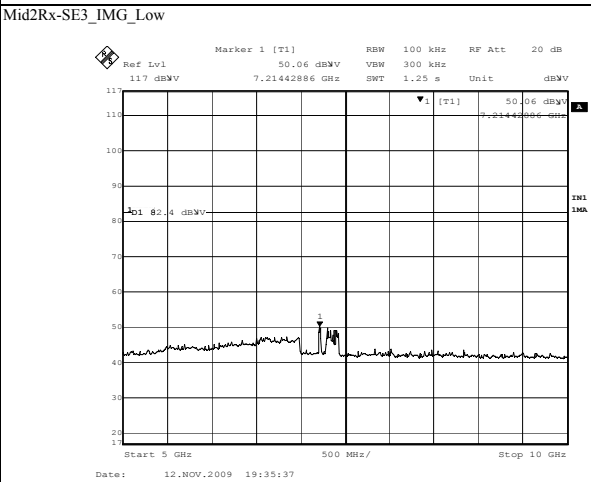
30MHz - 1GHz



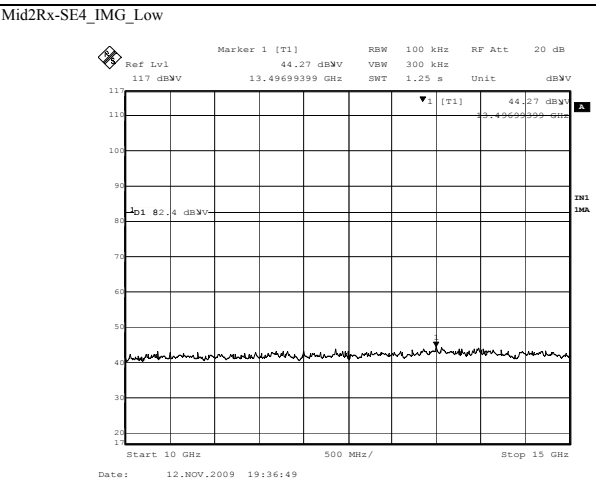
1GHz - 5GHz



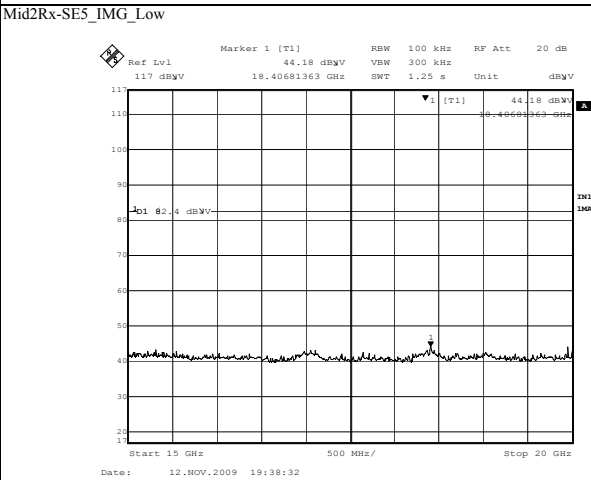
5GHz - 10GHz



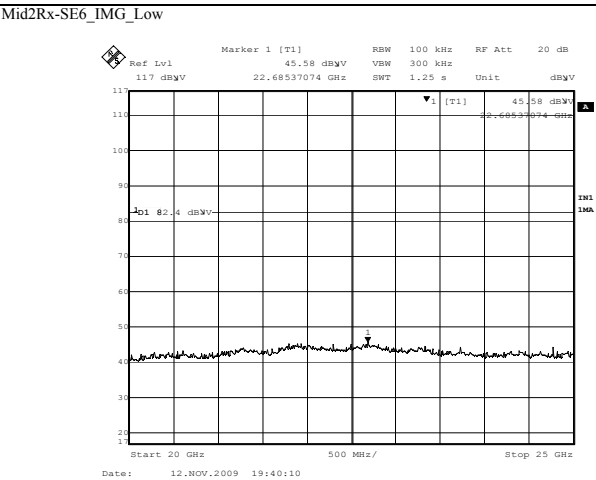
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



UL Japan, Inc.
Shonan EMC Lab.

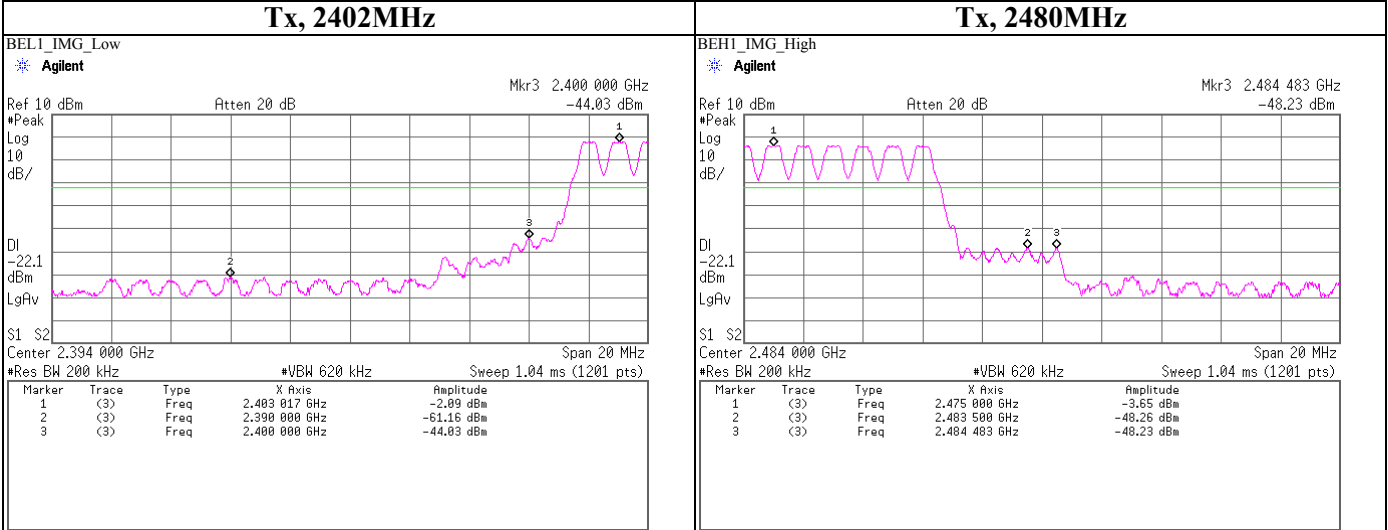
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Spurious emission (Conducted)

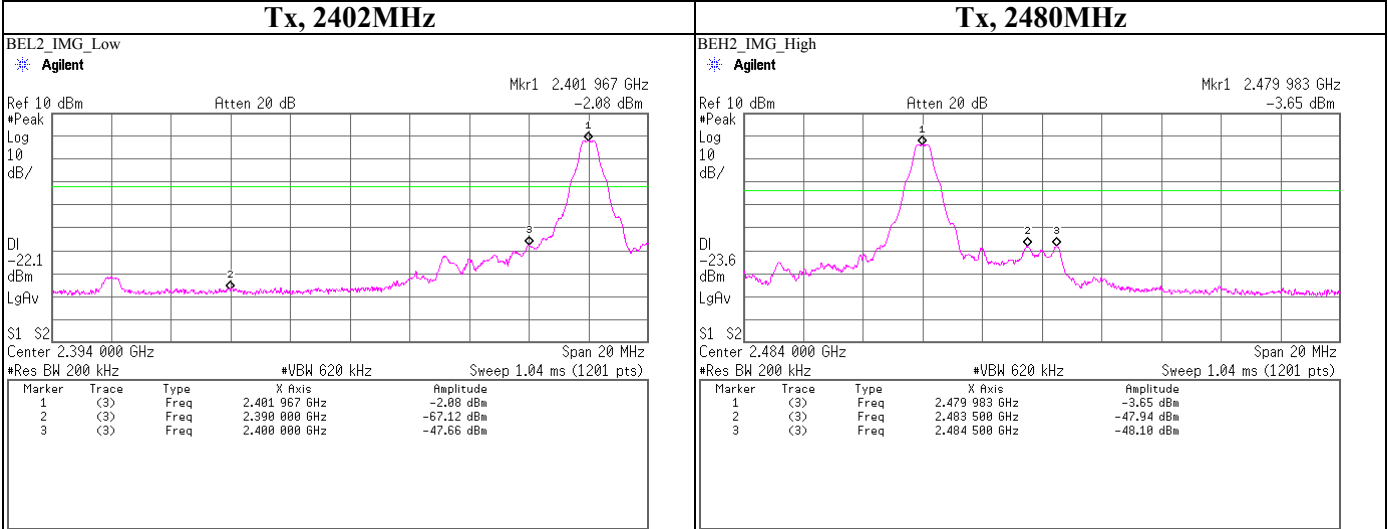
Band Edge compliance

DH5,

Hopping ON



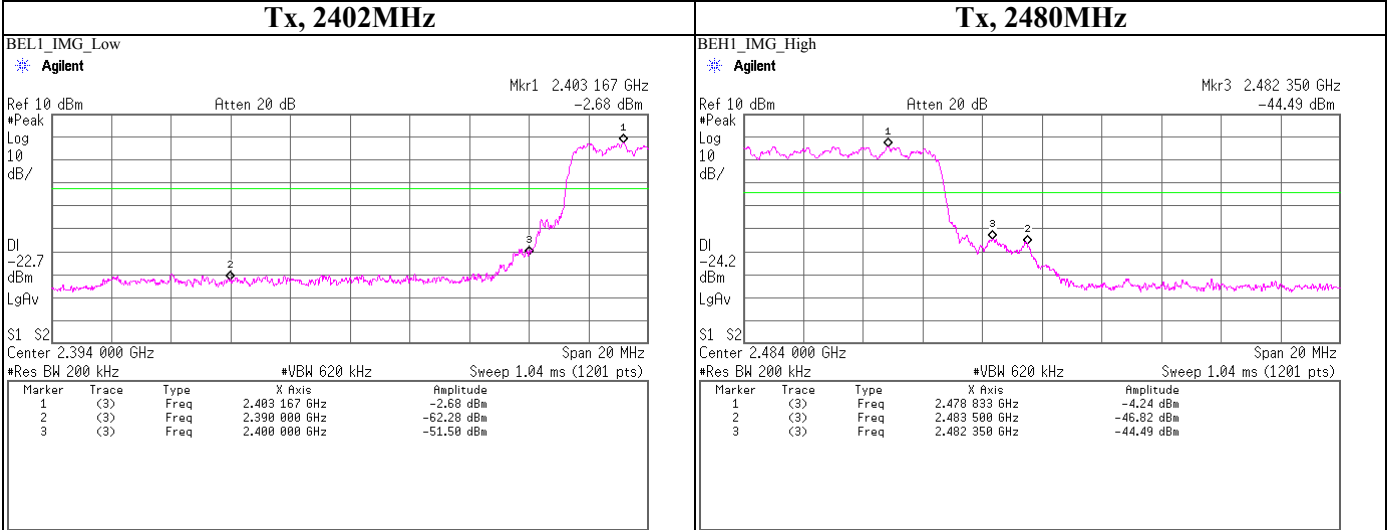
Hopping OFF



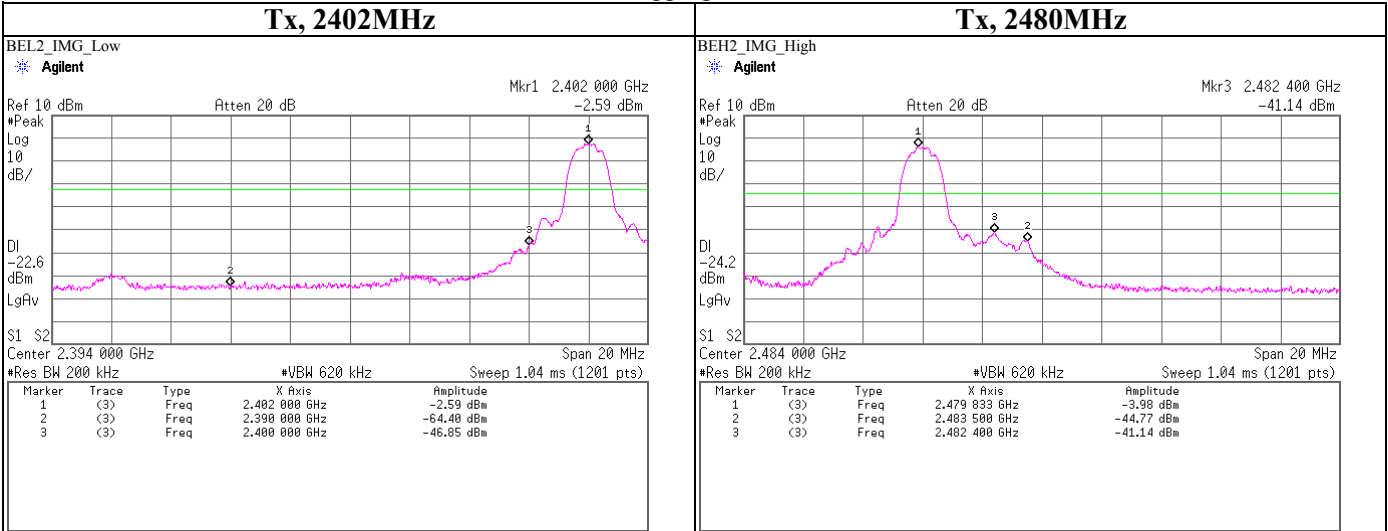
Spurious emission (Conducted)

Band Edge compliance
3-DH5,

Hopping ON



Hopping OFF



DATA OF RADIATED EMISSION TEST

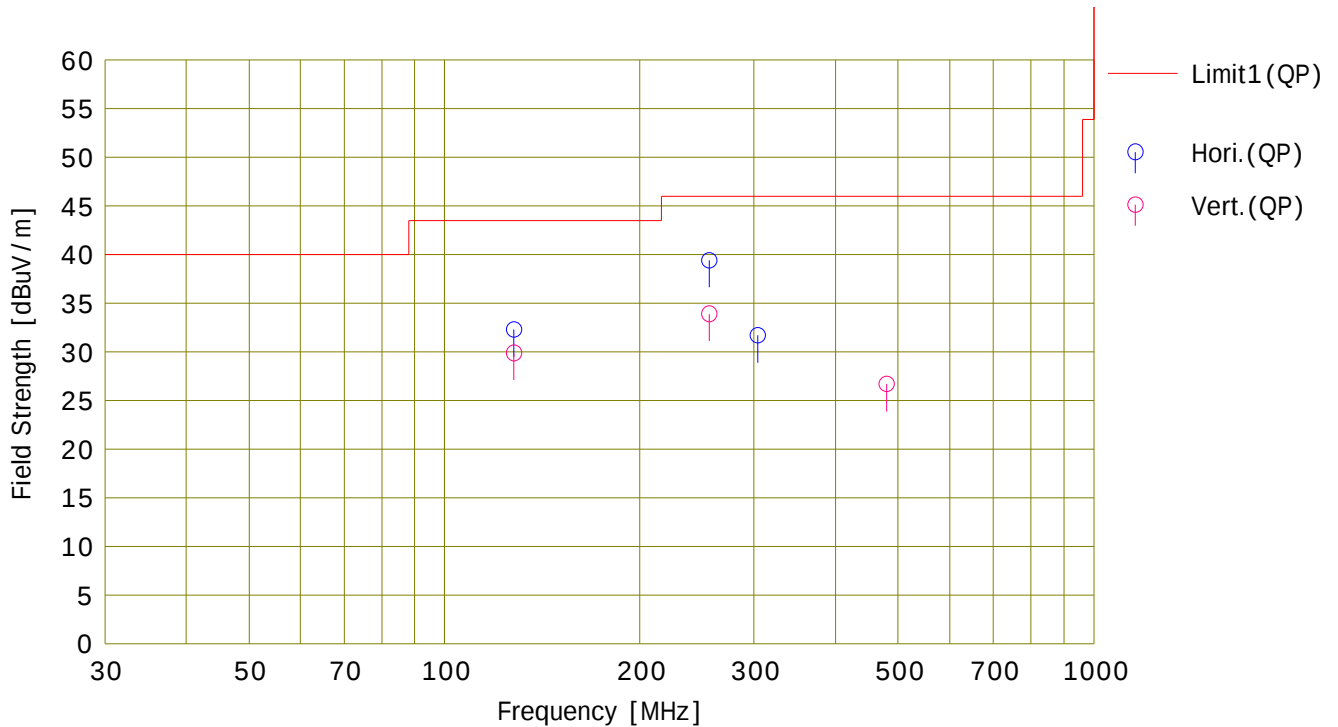
UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035
Mode : Transmitting (DH5.2402MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 / 37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishihwata



No.	Freq. [MHz]	Reading <QP>	Ant. Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	128.000	43.4	13.6	7.3	32.0	32.3	43.5	11.2	Hori.	232	179	BC	
2	255.995	45.8	17.4	8.1	31.9	39.4	46.0	6.6	Hori.	130	3	BC	
3	303.998	41.5	13.8	8.3	31.9	31.7	46.0	14.3	Hori.	100	0	LP	
4	128.002	41.0	13.6	7.3	32.0	29.9	43.5	13.6	Vert.	100	94	BC	
5	255.996	40.3	17.4	8.1	31.9	33.9	46.0	12.1	Vert.	217	159	BC	
6	480.005	32.5	17.1	9.0	31.9	26.7	46.0	19.3	Vert.	100	260	LP	

Calculation: Result [dBuV/m] = Reading [dBuV] + Ant. Fac [dB/m] + Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant. Type = BC: Biconical Antenna, LP: Logperiodic Antenna, SHA **: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (DH5 2402MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:X, Ver:Y

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

No.	Freq	Reading		Ant.Fac	Loss	Gain	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
	[MHz]	[dBuV]	[dBuV]				[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1602.050	48.9	52.8	25.2	2.8	39.6	37.3	41.2	53.9	73.9	16.6	32.7	Hori	102	129	SHA03	VBW:10Hz
2	2380.000	34.4	45.9	27.6	3.4	39.8	25.6	37.1	53.9	73.9	28.3	36.8	Hori	0	0	SHA03	No noise detected
3	2400.000	50.5	59.3	27.6	3.6	39.8	41.9	50.7	53.9	73.9	12.0	23.2	Hori	100	117	SHA03	VBW:300Hz
4	4804.000	50.2	54.8	30.6	5.0	39.5	46.3	50.9	53.9	73.9	7.6	23.0	Hori	100	92	SHA03	VBW:300Hz
5	7206.000	43.5	51.3	36.0	6.3	38.3	47.5	55.3	53.9	73.9	6.4	18.6	Hori	114	321	SHA03	VBW:300Hz
6	9608.000	36.8	47.1	38.4	7.2	36.9	45.5	55.8	53.9	73.9	8.4	18.1	Hori	100	303	SHA03	VBW:300Hz
7	12010.000	32.7	44.1	39.7	8.3	38.0	42.7	54.1	53.9	73.9	11.2	19.8	Hori	0	0	SHA03	No noise detected
8	1602.070	49.0	53.2	25.2	2.8	39.6	37.4	41.6	53.9	73.9	16.6	32.3	Vert	100	61	SHA03	VBW:10Hz
9	2380.000	34.4	45.6	27.6	3.4	39.8	25.6	36.8	53.9	73.9	28.4	37.1	Vert	0	0	SHA03	No noise detected
10	2400.000	51.0	58.5	27.6	3.6	39.8	42.4	49.9	53.9	73.9	11.5	24.0	Vert	165	103	SHA03	VBW:300Hz
11	4804.000	56.3	59.5	30.6	5.0	39.5	52.4	55.6	53.9	73.9	1.5	18.3	Vert	105	184	SHA03	VBW:300Hz
12	7206.000	47.2	53.8	36.0	6.3	38.3	51.2	57.8	53.9	73.9	2.7	16.1	Vert	100	186	SHA03	VBW:300Hz
13	9608.000	34.8	45.8	38.4	7.2	36.9	43.5	54.5	53.9	73.9	10.4	19.4	Vert	145	167	SHA03	VBW300Hz
14	12010.000	32.9	44.2	39.7	8.3	38.0	42.9	54.2	53.9	73.9	11.0	19.7	Vert	0	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

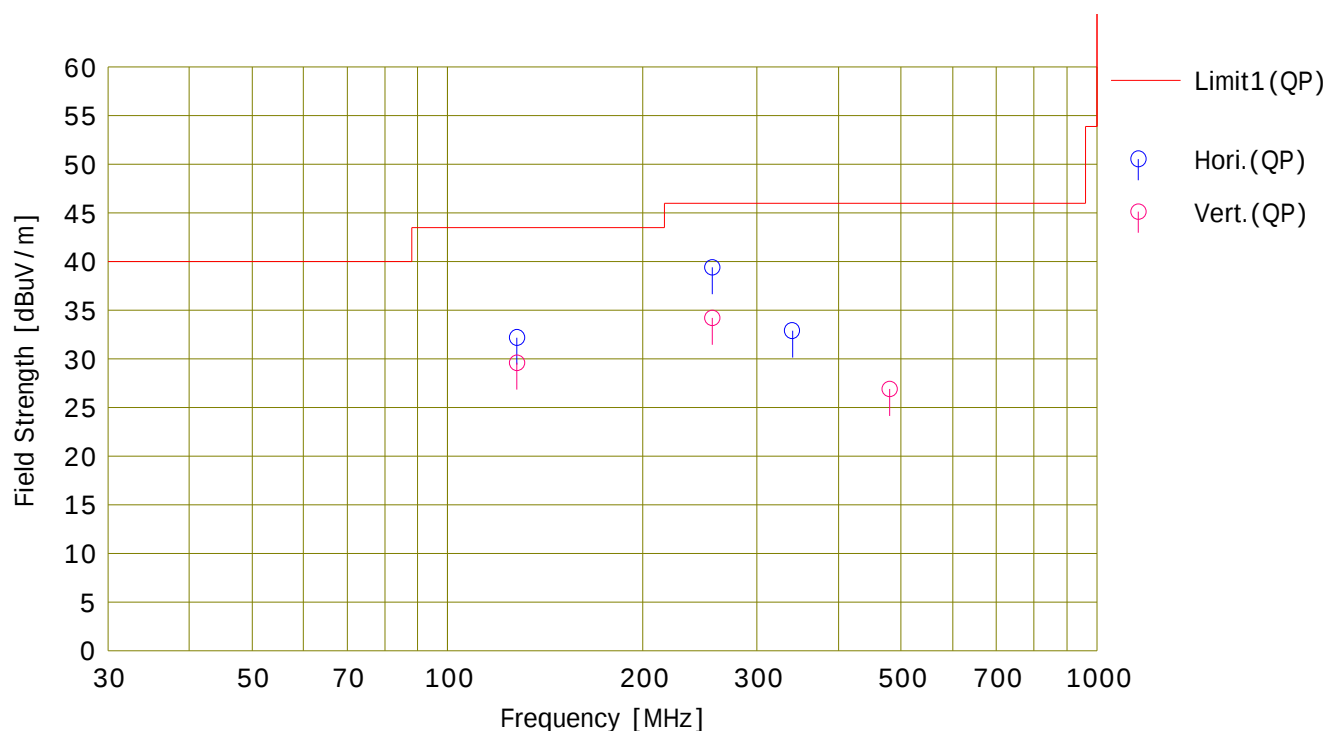
UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035
Mode : Transmitting (DH5.2441MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 / 37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishiwata



No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	128.001	43.3	13.6	7.3	32.0	32.2	43.5	11.3	Hori	231	180	BC	
2	255.999	45.8	17.4	8.1	31.9	39.4	46.0	6.6	Hori	131	3	BC	
3	339.997	41.8	14.6	8.4	31.9	32.9	46.0	13.1	Hori	100	1	LP	
4	128.002	40.7	13.6	7.3	32.0	29.6	43.5	13.9	Vert.	100	94	BC	
5	255.995	40.6	17.4	8.1	31.9	34.2	46.0	11.8	Vert.	218	155	BC	
6	480.006	32.7	17.1	9.0	31.9	26.9	46.0	19.1	Vert.	100	261	LP	

Calculation: Result [dBuV/m] = Reading [dBuV] + Ant.Fac [dB/m] + Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (DH5 2441MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:Y, Ver:X

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

No.	Freq	Reading		Ant.Fac	Loss	Gain	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1628.045	48.8	52.8	25.2	2.8	39.7	37.1	41.1	53.9	73.9	16.8	32.8	Hori	100	232	SHA03	VBW:10Hz
2	4882.000	45.9	51.5	30.9	5.2	39.5	42.5	48.1	53.9	73.9	11.4	25.8	Hori	100	116	SHA03	VBW:300Hz
3	7323.000	40.3	50.3	36.0	6.4	38.4	44.3	54.3	53.9	73.9	9.6	19.6	Hori	103	317	SHA03	VBW:300Hz
4	9764.000	33.6	44.9	38.4	7.3	37.0	42.3	53.6	53.9	73.9	11.6	20.3	Hori	100	297	SHA03	VBW:300Hz
5	12205.000	33.2	44.3	39.7	8.3	37.7	43.5	54.6	53.9	73.9	10.4	19.3	Hori	0	0	SHA03	No noise detected
6	1628.087	48.9	52.7	25.2	2.8	39.7	37.2	41.0	53.9	73.9	16.7	32.9	Vert	100	347	SHA03	VBW:10Hz
7	4882.000	53.7	58.4	30.9	5.2	39.5	50.3	55.0	53.9	73.9	3.6	18.9	Vert	103	181	SHA03	VBW:300Hz
8	7323.000	43.1	51.3	36.0	6.4	38.4	47.1	55.3	53.9	73.9	6.8	18.6	Vert	103	184	SHA03	VBW:300Hz
9	9764.000	33.5	45.3	38.4	7.3	37.0	42.2	54.0	53.9	73.9	11.7	19.9	Vert	141	167	SHA03	VBW:300Hz
10	12205.000	33.2	44.9	39.7	8.3	37.7	43.5	55.2	53.9	73.9	10.4	18.8	Vert	0	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

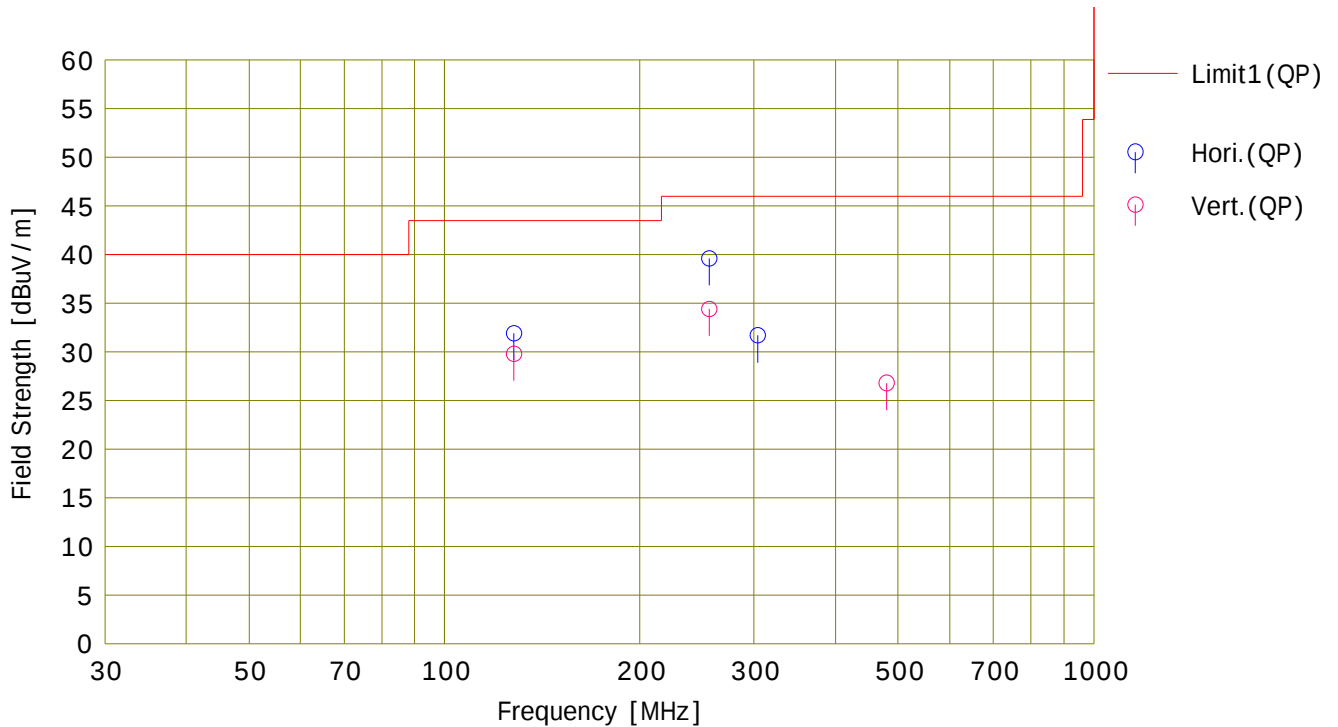
UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035
Mode : Transmitting (DH5.2480MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 / 37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishiwata



No.	Freq. [MHz]	Reading <QP>	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	128.005	43.0	13.6	7.3	32.0	31.9	43.5	11.6	Hori	230	177	BC	
2	255.997	46.0	17.4	8.1	31.9	39.6	46.0	6.4	Hori	132	4	BC	
3	304.000	41.5	13.8	8.3	31.9	31.7	46.0	14.3	Hori	100	2	LP	
4	128.001	40.9	13.6	7.3	32.0	29.8	43.5	13.7	Vert.	100	94	BC	
5	256.000	40.8	17.4	8.1	31.9	34.4	46.0	11.6	Vert.	216	157	BC	
6	480.001	32.6	17.1	9.0	31.9	26.8	46.0	19.2	Vert.	100	255	LP	

Calculation: Result [dBuV/m] = Reading [dBuV] + Ant.Fac [dB/m] + Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (DH5 2480MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V (AC Adaptor 120V/60Hz)
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:Y, Ver:X

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

No.	Freq	Reading		Ant.Fac	Loss	Gain	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1654.085	49.1	53.0	25.3	2.9	39.7	37.6	41.5	53.9	73.9	16.3	32.4	Hori	104	80	SHA03	VBW:10Hz
2	2483.500	45.6	53.6	27.9	3.6	39.8	37.3	45.3	53.9	73.9	16.6	28.6	Hori	100	119	SHA03	VBW:300Hz
3	4960.000	44.7	54.9	31.1	5.3	39.4	41.7	51.9	53.9	73.9	12.2	22.0	Hori	100	94	SHA03	VBW:300Hz
4	7440.000	37.3	47.7	35.9	6.5	38.5	41.2	51.6	53.9	73.9	12.8	22.3	Hori	109	319	SHA03	VBW:300Hz
5	12400.000	34.2	46.3	39.7	8.5	37.4	45.0	57.1	53.9	73.9	8.9	16.9	Hori	100	0	SHA03	No noise detected
6	1654.087	56.0	58.0	25.3	2.9	39.7	44.5	46.5	53.9	73.9	9.4	27.4	Vert	114	177	SHA03	VBW:10Hz
7	2483.500	47.4	55.1	27.9	3.6	39.8	39.1	46.8	53.9	73.9	14.8	27.1	Vert	100	205	SHA03	VBW:300Hz
8	4960.000	51.7	59.2	31.1	5.3	39.4	48.7	56.2	53.9	73.9	5.2	17.7	Vert	102	194	SHA03	VBW:300Hz
9	7440.000	38.6	48.9	35.9	6.5	38.5	42.5	52.8	53.9	73.9	11.4	21.1	Vert	100	179	SHA03	VBW:300Hz
10	9920.000	32.6	44.3	38.3	7.3	37.1	41.1	52.8	53.9	73.9	12.8	21.1	Vert	100	173	SHA03	VBW:300Hz
11	12400.000	34.1	46.1	39.7	8.5	37.4	44.9	56.9	53.9	73.9	9.0	17.0	Vert	100	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

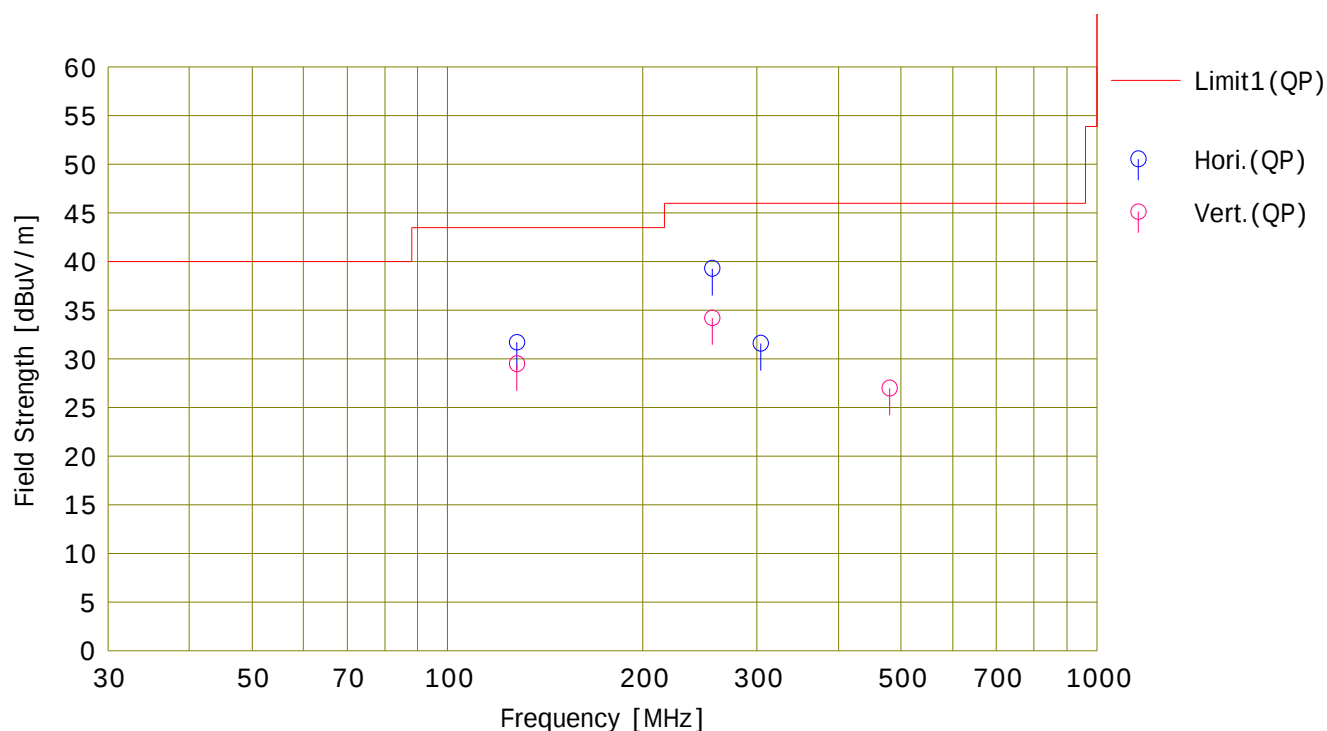
UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035
Mode : Transmitting (3DH5_2402MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 /37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishiwata



No.	Freq. [MHz]	Reading <QP>	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	128.000	42.8	13.6	7.3	32.0	31.7	43.5	11.8	Hori	229	179	BC	
2	255.998	45.7	17.4	8.1	31.9	39.3	46.0	6.7	Hori	130	0	BC	
3	303.999	41.4	13.8	8.3	31.9	31.6	46.0	14.4	Hori	100	0	LP	
4	128.000	40.6	13.6	7.3	32.0	29.5	43.5	14.0	Vert.	100	94	BC	
5	255.999	40.6	17.4	8.1	31.9	34.2	46.0	11.8	Vert.	215	156	BC	
6	480.007	32.8	17.1	9.0	31.9	27.0	46.0	19.0	Vert.	100	257	LP	

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (3DH5 2402MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:Y, Ver:X

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

No.	Freq [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]				[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1602.076	51.1	54.6	25.2	2.8	39.6	39.5	43.0	53.9	73.9	14.4	30.9	Hori	113	65	SHA03	VBW:10Hz
2	2390.000	34.8	46.0	27.6	3.4	39.8	26.0	37.2	53.9	73.9	27.9	36.7	Hori	117	169	SHA03	VBW:300Hz
3	2400.000	53.2	64.7	27.6	3.6	39.8	44.6	56.1	53.9	73.9	9.3	17.8	Hori	117	169	SHA03	VBW:300Hz
4	4804.000	42.2	51.9	30.6	5.0	39.5	38.3	48.0	53.9	73.9	15.6	25.9	Hori	100	334	SHA03	VBW:300Hz
5	7206.000	38.6	50.3	36.0	6.3	38.3	42.6	54.3	53.9	73.9	11.3	19.6	Hori	100	305	SHA03	VBW:300Hz
6	9608.000	35.2	47.2	38.4	7.2	36.9	43.9	55.9	53.9	73.9	10.0	18.0	Hori	100	0	SHA03	No noise detected
7	12010.000	34.1	45.9	39.7	8.3	38.0	44.1	55.9	53.9	73.9	9.8	18.0	Hori	100	0	SHA03	No noise detected
8	1602.065	49.9	53.9	25.2	2.8	39.6	38.3	42.3	53.9	73.9	15.6	31.6	Vert	100	4	SHA03	VBW:10Hz
9	2390.000	34.6	46.4	27.6	3.4	39.8	25.8	37.6	53.9	73.9	28.1	36.3	Vert	100	24	SHA03	VBW:300Hz
10	2400.000	53.2	64.2	27.6	3.6	39.8	44.6	55.6	53.9	73.9	9.3	18.3	Vert	100	28	SHA03	VBW:300Hz
11	4804.000	42.3	52.1	30.6	5.0	39.5	38.4	48.2	53.9	73.9	15.5	25.7	Vert	100	0	SHA03	VBW:300Hz
12	7206.000	38.7	50.2	36.0	6.3	38.3	42.7	54.2	53.9	73.9	11.2	19.7	Vert	100	0	SHA03	No noise detected
13	9608.000	34.2	46.1	38.4	7.2	36.9	42.9	54.8	53.9	73.9	11.0	19.1	Vert	100	0	SHA03	No noise detected
14	12010.000	33.7	45.5	39.7	8.3	38.0	43.7	55.5	53.9	73.9	10.2	18.4	Vert	100	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

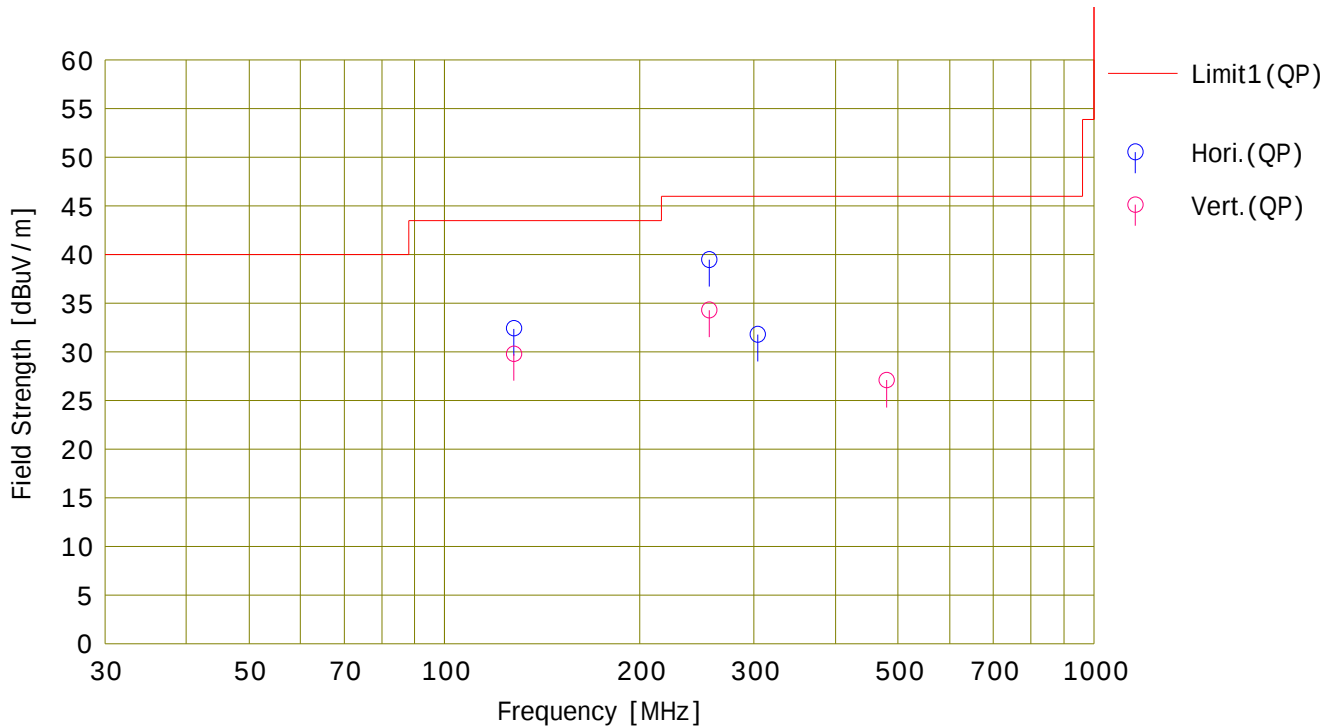
Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035

Mode : Transmitting (3DH5_2441MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 /37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishiwata



No.	Freq. [MHz]	Reading <QP>	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	128.001	43.5	13.6	7.3	32.0	32.4	43.5	11.1	Hori	231	179	BC	
2	255.996	45.9	17.4	8.1	31.9	39.5	46.0	6.5	Hori	128	2	BC	
3	303.998	41.6	13.8	8.3	31.9	31.8	46.0	14.2	Hori	100	1	LP	
4	128.001	40.9	13.6	7.3	32.0	29.8	43.5	13.7	Vert.	100	94	BC	
5	255.996	40.7	17.4	8.1	31.9	34.3	46.0	11.7	Vert.	215	155	BC	
6	480.003	32.9	17.1	9.0	31.9	27.1	46.0	18.9	Vert.	100	257	LP	

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA **:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (3DH5 2441MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:Y, Ver:X

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

No.	Freq	Reading		Ant.Fac	Loss	Gain	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1628.059	51.6	55.3	25.2	2.8	39.7	39.9	43.6	53.9	73.9	14.0	30.4	Hori	113	65	SHA03	VBW:10Hz
2	4882.000	43.2	52.4	30.9	5.2	39.5	39.8	49.0	53.9	73.9	14.1	24.9	Hori	117	169	SHA03	VBW:300Hz
3	7323.000	36.4	47.7	36.0	6.4	38.4	40.4	51.7	53.9	73.9	13.5	22.2	Hori	100	334	SHA03	VBW:300Hz
4	9764.000	33.7	45.3	38.4	7.3	37.0	42.4	54.0	53.9	73.9	11.5	19.9	Hori	100	305	SHA03	VBW:300Hz
5	12205.000	34.3	46.2	39.7	8.3	37.7	44.6	56.5	53.9	73.9	9.3	17.4	Hori	100	0	SHA03	No noise detected
6	1628.073	51.2	54.4	25.2	2.8	39.7	39.5	42.7	53.9	73.9	14.4	31.2	Vert	100	4	SHA03	VBW:10Hz
7	4882.000	39.5	49.9	30.9	5.2	39.5	36.1	46.5	53.9	73.9	17.8	27.4	Vert	100	24	SHA03	VBW:300Hz
8	7323.000	36.8	47.2	36.0	6.4	38.4	40.8	51.2	53.9	73.9	13.1	22.7	Vert	100	28	SHA03	VBW:300Hz
9	9764.000	33.4	45.0	38.4	7.3	37.0	42.1	53.7	53.9	73.9	11.8	20.2	Vert	100	0	SHA03	VBW:300Hz
10	12205.000	34.2	45.3	39.7	8.3	37.7	44.5	55.6	53.9	73.9	9.4	18.3	Vert	100	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

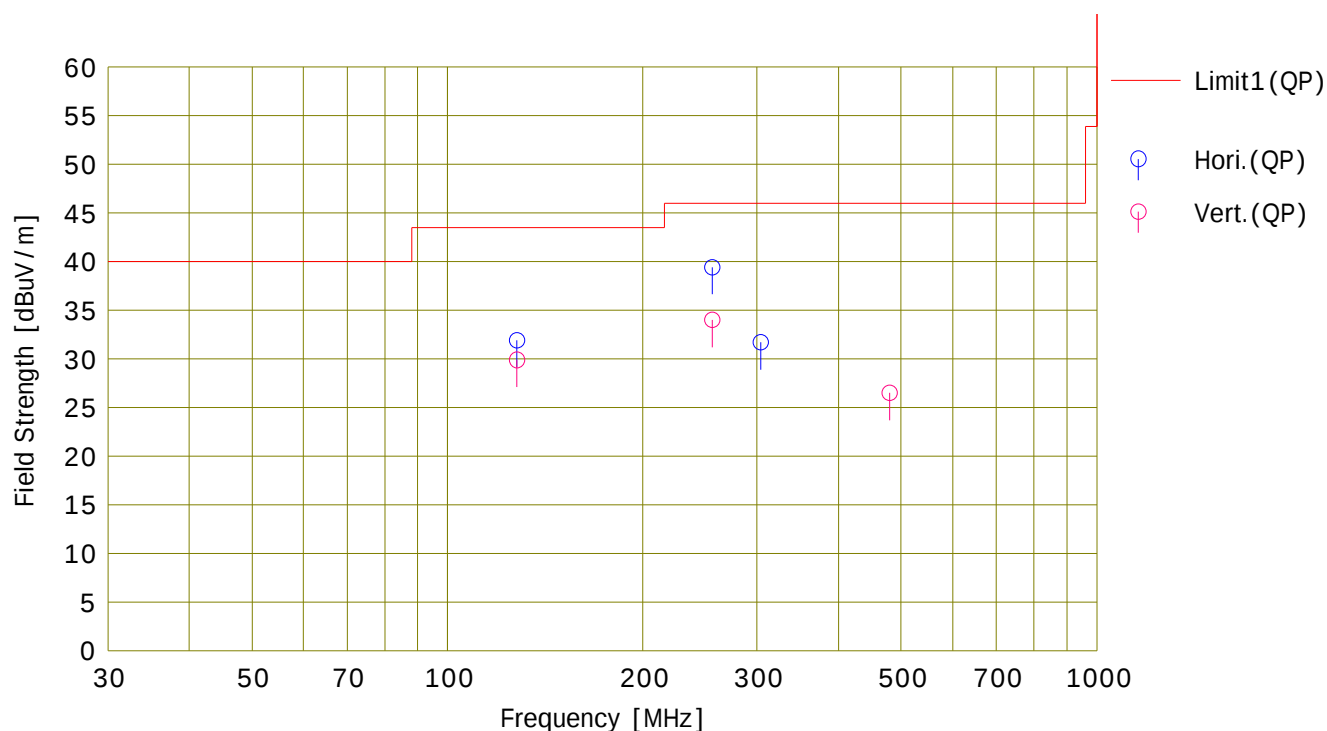
UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/05

Company : BRIDGESTONE CORPORATION
Kind of EUT : TPMS(Tire Pressure Monitoring System)
Model No. : K612(TAG-READER)
Serial No. : TR035
Mode : Transmitting (3DH5_2480MHz)
Report No. : 30CE0195-SH-01-A
Power : DC3V
Temp./Humi. : 26 /37%

Remarks : Hor:Y Ver:Z

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Go Ishiwata



No.	Freq. [MHz]	Reading <QP>	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	128.003	43.0	13.6	7.3	32.0	31.9	43.5	11.6	Hori	228	178	BC	
2	256.000	45.8	17.4	8.1	31.9	39.4	46.0	6.6	Hori	131	0	BC	
3	304.000	41.5	13.8	8.3	31.9	31.7	46.0	14.3	Hori	100	1	LP	
4	128.001	41.0	13.6	7.3	32.0	29.9	43.5	13.6	Vert.	100	98	BC	
5	255.999	40.4	17.4	8.1	31.9	34.0	46.0	12.0	Vert.	216	157	BC	
6	480.001	32.3	17.1	9.0	31.9	26.5	46.0	19.5	Vert.	100	262	LP	

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2009/11/03

Company : BRIDGESTONE CORPORATION Mode : Transmitting (3DH5 2480MHz)
Kind of EUT : TPMS(Tire Pressure Monitoring System) Report No. : 30CE0195-SH-01-A
Model No. : K612(TAG-READER) Power : DC3V
Serial No. : TR035 Temp./Humi. : 22 /42%

Remarks : Hor:Y, Ver:X

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Limit2 : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK

Engineer : Tatsuya Arai

<< AV/PK DATA >>

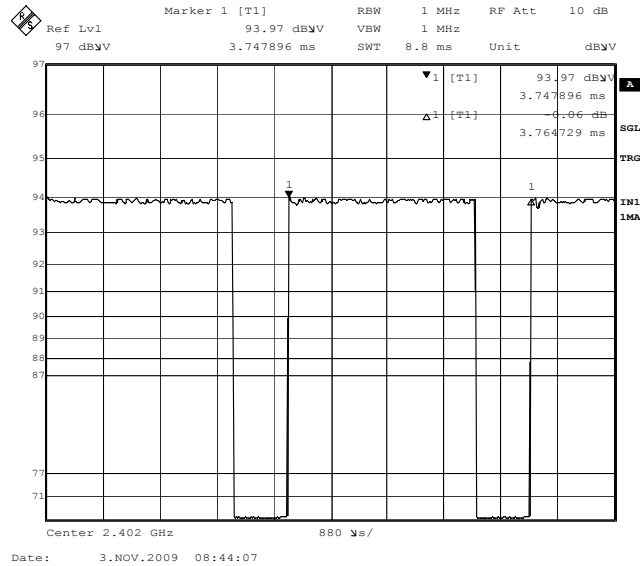
No.	Freq	Reading		Ant.Fac	Loss	Gain	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>				<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
	[MHz]	[dBuV]	[dBuV]				[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]		[H/V]	[cm]	[deg]	
1	1654.065	49.8	53.6	25.3	2.9	39.7	38.3	42.1	53.9	73.9	15.6	31.9	Hori	140	225	SHA03	VBW:10Hz
2	2483.500	45.9	57.8	27.9	3.6	39.8	37.6	49.5	53.9	73.9	16.3	24.5	Hori	100	123	SHA03	VBW:300Hz
3	4960.000	37.7	48.2	31.1	5.3	39.4	34.7	45.2	53.9	73.9	19.2	28.7	Hori	100	123	SHA03	VBW:300Hz
4	7440.000	35.3	47.1	35.9	6.5	38.5	39.2	51.0	53.9	73.9	14.7	22.9	Hori	100	319	SHA03	VBW:300Hz
5	9920.000	33.0	47.1	38.3	7.3	37.1	41.5	55.6	53.9	73.9	12.4	18.3	Hori	100	0	SHA03	VBW:300Hz
6	12400.000	34.0	45.3	39.7	8.5	37.4	44.8	56.1	53.9	73.9	9.2	17.8	Hori	100	0	SHA03	No noise detected
7	1654.065	55.8	59.0	25.3	2.9	39.7	44.3	47.5	53.9	73.9	9.6	26.4	Vert	113	169	SHA03	VBW:10Hz
8	2483.500	47.8	58.8	27.9	3.6	39.8	39.5	50.5	53.9	73.9	14.4	23.4	Vert	100	198	SHA03	VBW:300Hz
9	4960.000	42.8	58.3	31.1	5.3	39.4	39.8	55.3	53.9	73.9	14.2	18.6	Vert	102	184	SHA03	VBW:300Hz
10	7440.000	35.9	46.7	35.9	6.5	38.5	39.8	50.6	53.9	73.9	14.1	23.4	Vert	102	197	SHA03	VBW:300Hz
11	9920.000	33.2	44.4	38.3	7.3	37.1	41.7	52.9	53.9	73.9	12.2	21.1	Vert	100	0	SHA03	VBW:300Hz
12	12400.000	34.1	45.7	39.7	8.5	37.4	44.9	56.5	53.9	73.9	9.0	17.4	Vert	100	0	SHA03	No noise detected

Calculation:Result [dBuV/m]=Reading [dBuV]+Ant.Fac [dB/m]+Loss (Cable+ATT) [dB] - Gain (AMP) [dB]
Ant.Type=BC:Biconical Antenna, LP:Logperiodic Antenna, SHA*:Horn Antenna

Duty Cycle

COMPANY	: BRIDGESTONE CORPORATION	REPORT NO	: 30CE0195-SH-01-A
EQUIPMENT	: TPMS(Tire Pressure Monitoring System)	DATE	: 2009/11/03
MODEL NUMBER	: K612(TAG-READER)	TEMP./HUMI	: 22deg.C./42%
SERIAL NUMBER	: TR035	TEST MODE	: Tx2402MHz
POWER	: DC3V	ENGINEER	: Tatsuya Arai

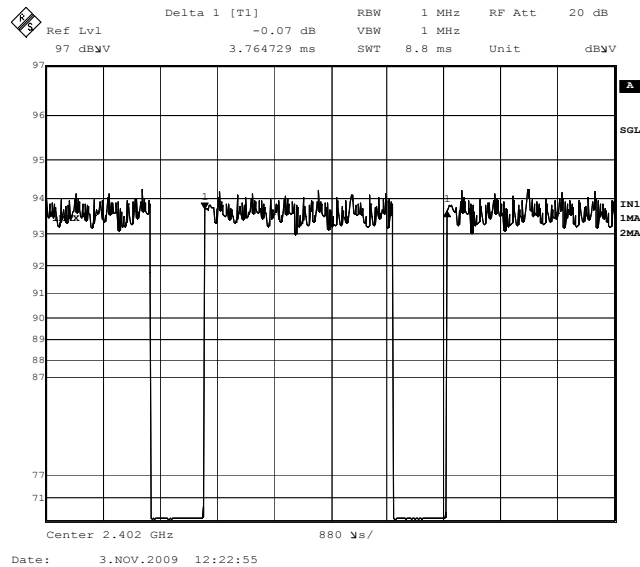
[DH5]



Duty Cycle: 3.765ms

AV Detector VBW: $1000 / 3.765\text{ms} = 265.60\text{Hz} \rightarrow 300\text{Hz}$

[3DH5]



Duty Cycle: 3.764ms

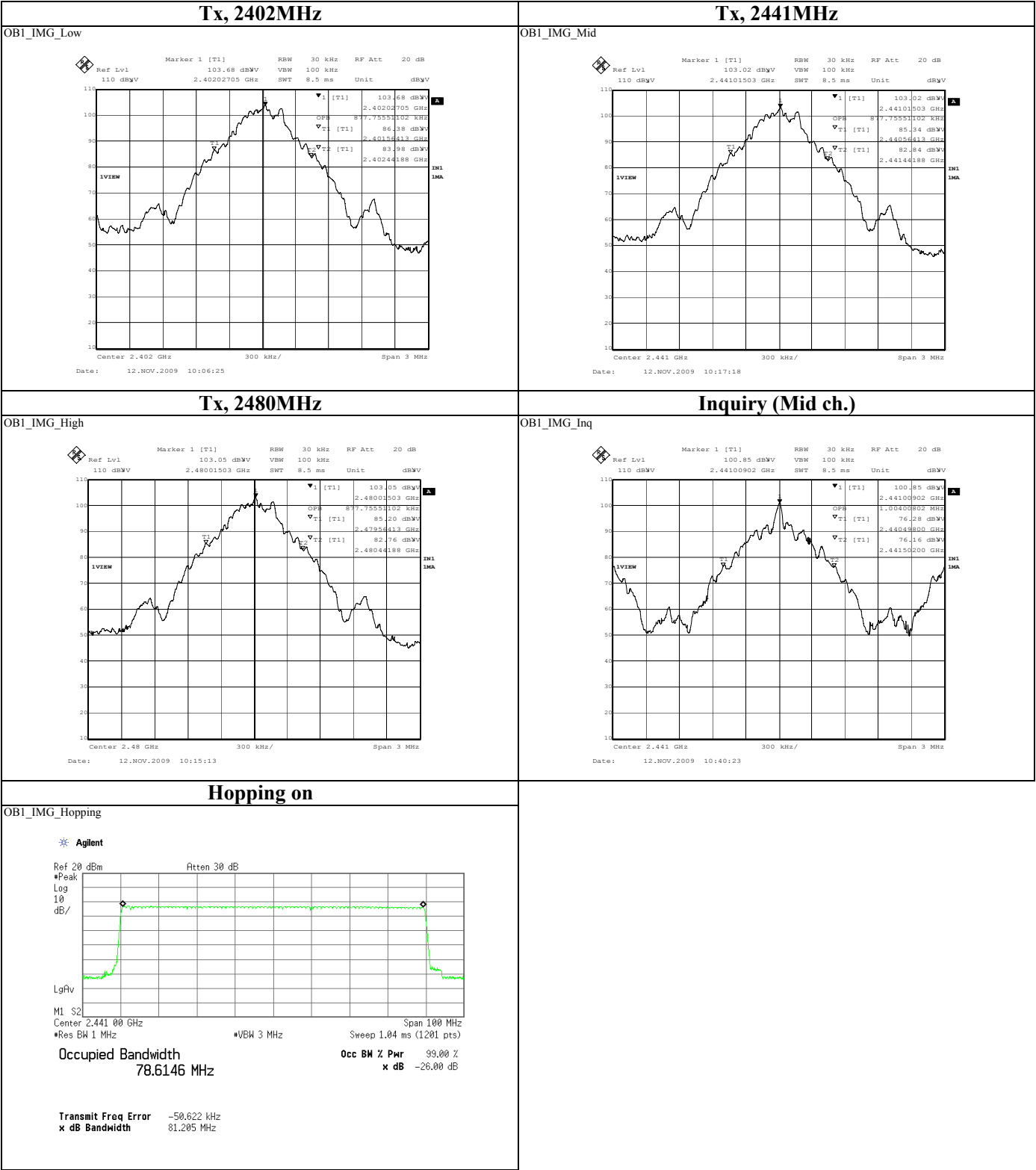
AV Detector VBW: $1000 / 3.764\text{ms} = 265.67\text{Hz} \rightarrow 300\text{Hz}$

- * All the measured noise was pulse emission.
- * Duty cycle was within 100msec.

This purpose of the Duty Cycle calculation measures the pulse timing that we ensure Spectrum Analyzer can detect the pulse emission correctly. Therefore, if the pulse train can happen by 50msec(20Hz) or less, the average value measurement by setting the repetition frequency is done more correctly than VBW=10Hz that DA 00-705 accepts for AV detect. For instance, if pulse cycle is every 10msec, we set VBW = 100Hz(=1000/10) in order not to overlook a pulse unexpectedly.

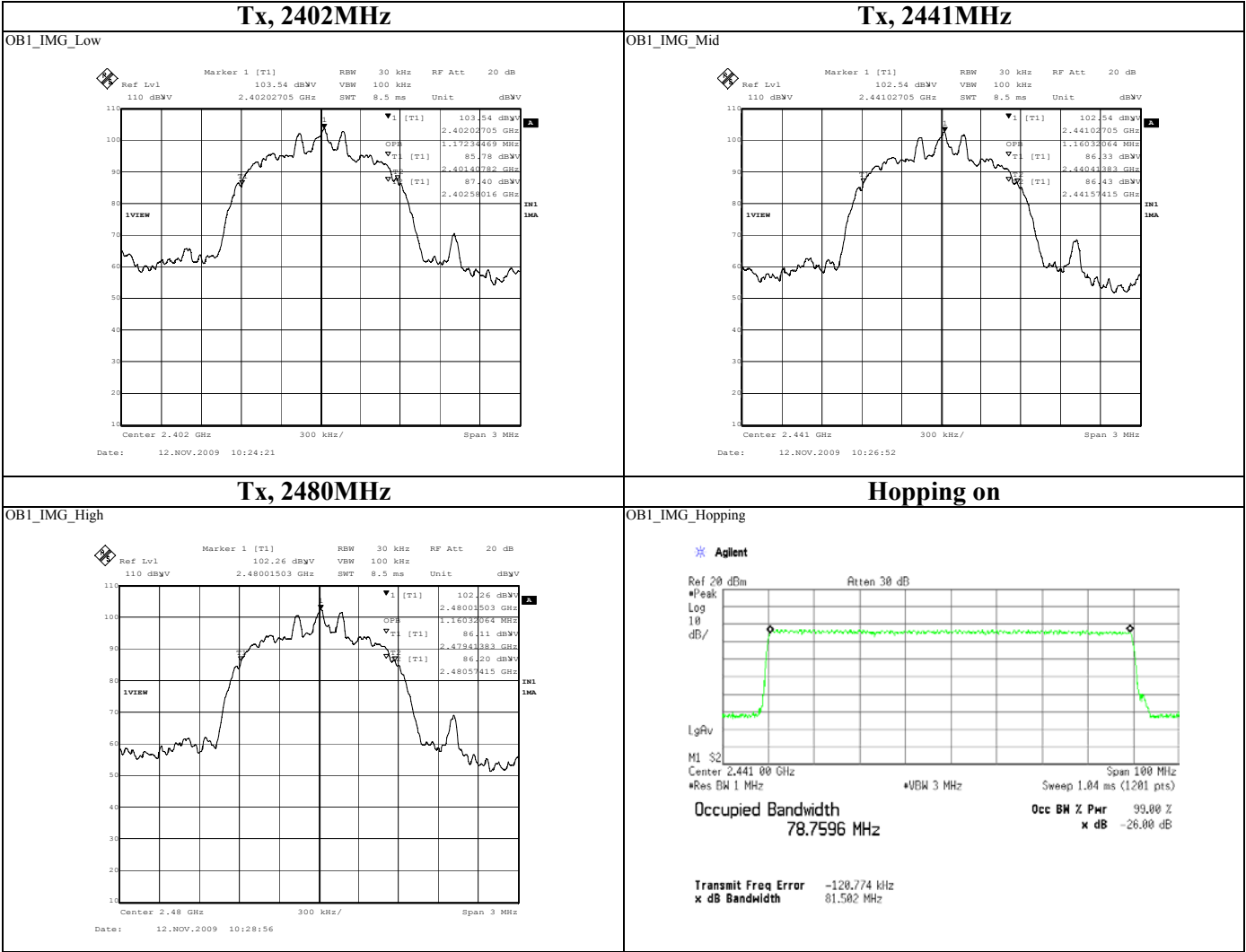
99% Occupied Bandwidth

DH5,



99% Occupied Bandwidth

3-DH5,



APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2009/03/26 * 12
SCC-G03	Coaxial Cable	Suhner	SUCOFLEX 104A	46499/4A	RE	2009/04/10 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2009/05/27 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2009/08/23 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2009/02/04 * 12
STR-03	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE	2009/04/08 * 12
SJM-03	Measure	KOMELON	KMC-36	-	RE,CE	-
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV	-	RE,CE	-
SHA-05	Horn Antenna	ETS LINDGREN	3160-09	LM4210	RE	2009/04/09 * 12
SAF-09	Pre Amplifier	TOYO Corporation	HAP18-26W	00000018	RE	2009/03/27 * 12
SCC-G18	Coaxial Cable	Suhner	SUCOFLEX 104A	46292/4A	RE	2009/03/24 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2009/02/13 * 12
SAT6-05	Attenuator	JFW	50HF-006N	-	RE	2009/02/13 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2009/03/20 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2009/04/06 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2009/03/20 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2009/09/18 * 12
STR-01	Test Receiver	Rohde & Schwarz	ESU40	100093	RE	2009/04/02 * 12
STR-03	Test Receiver	Rohde & Schwarz	ESI40	100054/040	CE,AT1,2,3,4,6	2009/04/08 * 12
SCC-G11	Coaxial Cable	Suhner	SUCOFLEX 102	31595/2	AT1,2,3,4,6	2009/03/11 * 12
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT5	2009/03/16 * 12
SPSS-01	Power Sensor	Anritsu	MA2444D	0738366	AT5	2009/03/16 * 12
SOS-02	Humidity Indicator	A&D	AD-5681	4063343	AT all	2009/02/04 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	AT6	2009/06/16 * 12
SCC-C9/C10/SRSE-03	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-271(RF Selector)	CE	2009/04/06 * 12
SLS-05	LISN	Rohde & Schwarz	ENV216	100516	CE	2009/02/25 * 12
SOS-06	Humidity Indicator	A&D	AD-5681	4062118	CE	2009/02/04 * 12

The expiration date of the calibration is the end of the expired month .

As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with traceable calibrations . Each calibration is traceable to the national or international standards .

Test Item :

- CE: Conducted Emission
- RE: Out of Band Emission (Radiated)
- AT: Antenna terminal conducted test
 - 1: Carrier Frequency Separation
 - 2: 20dB Bandwidth
 - 3: Number of Hopping Frequency
 - 4: Dwell time
 - 5: Maximum Peak Output Power
 - 6: Out of Band Emission (Conducted)